How to Estimate Fair Market Valuation For Court-Ordered Minority Shareholding Buybacks [1]

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Abstract & Introduction

Lawyers, experts, courts and clients often face the tricky problem of how to find the fair market valuation for a court-ordered mandatory minority shareholding buyback. This paper explores various relevant factors that should be considered and included in any computations.

A scenario that frequently occurs in family, divorce, HNWI, and corporate disputes is the mandatory court or tribunal ordered buyout of a minority shareholder[3] by the majority shareholder[4] or occasionally vice versa, leaving one original shareholder ex post with 100% of the target shares and the other original shareholder ex post with 0%. In the rare case where the relevant company shares are publicly quoted with liquid pricing, then a fair market price can be established for a marginal share sale and purchase, and an appropriate premium or discount then potentially calculated

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[1] For latest version of this paper see: https://ssrn.com/abstract=4557728

[2] Dr Rupert Macey-Dare LLM, see: https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=732884   and https://www.linkedin.com/in/rupertmaceydare/ . Draft paper subject to correction, review and revision. All comments and communication on this and other matters and cases gratefully received.

[3] N.B. The minority shareholder is often also an employee or director of the company and the sale of their minority shareholding is often bundled with full exit from the company including exit as employee or director as well, which would probably have additional value and require additional compensation.

[4] N.B. The majority shareholder is usually an individual, but may also be company or consortium of investors bound by an agreement. This is understood in references to the majority shareholder below.

and used to adjust this price, to reflect the size of and differential market demand for the whole transaction tranche.[5]

However in the much more frequent cases where the company shares at stake are unquoted, unlisted and where there is no liquid pricing available, then some form of bespoke pricing model will be needed to establish a fair price for the share sale. A typical question that arises in such cases is whether a minority discount should be applied to the share sale and purchase price, reflecting the lack of corporate control of the minority shareholder, compared to the majority shareholder (as typically argued for by the majority share owner and minority stake purchaser) arguably reflecting the situation just before any purchase, where the valuation process and proposed transaction conceptually starts.

Alternatively should the share price applied to the minority shareholding just be pro rata and the same price per share as the majority shares, reflecting the fungibility and interchangeability of all shares in the same class, just after any purchase when the valuation process and proposed transaction conceptually ends? Or perhaps some intermediate, hybrid pricing solution?

To explore and develop this line of question further, this paper uses a simple corporate, minority and majority share valuation model. The impact of standalone minority share discounts is considered, as well as the impact of any additional standalone fire-sale discounts (if applicable) and any buyout premia and status quo disruption premia that would be needed to persuade a more reluctant share seller to sell. The model also considers the impact not only of company assets and liabilities just before any share sale, but also of company contingent assets and contingent liabilities, which could for example be off-balance sheet and excluded from statutory

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[5] This reference case where market quotation and trading generate observable fair market prices, is really a "straw man" and unlikely to be available in practice where there are a very small number of shareholders, because there would be unlikely to be sufficient trading for this setup to be cost efficient. There might well in such a case be indicative legacy prices quoted which would be reference-only and not be tradeable. A good analogy would be the stale screen pricing of illiquid bonds which had been placed with a limited number of investors. Furthermore any tradeable indicative pricing would typically just be for new marginal trades and any significant block trade in one direction would typically need to be at a significant large block size discount.

See e.g. Lillo F: "Order flow and price formation" Arxiv.org 4 May 2021 at https://arxiv.org/pdf/2105.00521.pdf for related discussion.

accounts, but still financially highly valuable and significant. Furthermore the model considers these factors both just before, and just after the proposed sale, where there could have been intervening step changes. Various potential real life illustrative scenarios are also considered in the Appendix.[6]

The conclusion is that while a minority share discount can be important, it is just one factor, typically "cherry-picked" and highlighted to the court by the purchaser, whose affect can be attenuated and even swamped by any required buyout premia and status quo disruption premia. Moreover these factors may well be further swamped by the expected change in company value via expected changes in both non-contingent and contingent assets and liabilities, following and flowing from the change of company control.[7]

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[6] These model features correspond with comparability adjustment factors, in a tax transfer pricing context, although the range of possible valuation models that can be used in most courts can be broader than that those favoured in the TPG Transfer Pricing Guidelines e.g. to include NPV and option pricing based models.

See e.g. OECD (2022), OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2022, OECD Publishing, Paris, https://doi.org/10.1787/0e655865-en and for a broader set of valuation techniques:

Damodaran A: "Damodaran on Valuation: Security Analysis for Investment and Corporate Finance: 324 (Wiley Finance) Hardcover – Illustrated, 22 Aug. 2006 at https://www.amazon.co.uk/Damodaran-Valuation-Security-Investment-Corporate/dp/0471751219 and

McKinsey & Company Inc, Koller T, Goedhart M, Wessels D: "Valuation: Measuring and Managing the Value of Companies (Wiley Finance) Hardcover – 6 Aug. 2020 at https://www.amazon.co.uk/Valuation-Measuring-Managing-Companies-Finance/dp/1119610885/ref=pd_bxgy_img_sccl_1/260-6717678-2787530 and

Damodaran A: "Dark Side of Valuation, The: Valuing Young, Distressed, and Complex Businesses: Valuing Young, Distressed, and Complex Businesses" Pearson FT Press; 3rd edition Paperback – 4 May 2018, at https://www.amazon.co.uk/Dark-Side-Valuation-Distressed-Businesses/dp/0134854101/ref=pd_bxgy_img_sccl_2/260-6717678-2787530 and

Royal Institution of Chartered Surveyors: "RICS Valuation – RED BOOK GLOBAL STANDARDS, Global Standards Effective from 31 January 2022" January 2022 at https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/red-book/red-book-global

[7] There may also be additional intangible assets and liabilities which can change, including "goodwill" that may be either on or off balance sheet, depending on the accounting conventions used.

See e.g. Wikipedia: "Goodwill" 2023 at https://en.wikipedia.org/wiki/Goodwill_(accounting)

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Depending on the degree to which either the minority shares seller or shares buyer is to receive the benefit from any expected change in company value flowing from the shares sale, so there will typically be a zone of potential agreement (ZOPA)[8] and range of potential fair market share prices at which the minority shares could be sold and bought, with the court determining where in this broader range it would be just to draw the specific fair market price line. But the net result of this analysis can often be that a significant premium rather than discount needs to be applied to the prior pro rate calculated share price, if company value is expected to rise[9]. Conversely, it can also be the case that the fair price of the sale could be at a significant discount or even zero or negative, if the company equity value is expected to fall in value significantly after the sale.[10] [11]

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[8] See e.g. Merino M: "UNDERSTANDING ZOPA: THE ZONE OF POSSIBLE AGREEMENT" Harvard Business School Online 14 September 2017 at https://online.hbs.edu/blog/post/understanding-zopa

[9] An example of this could be if the share buyer A who increases his shareholding from majority to totality, knows that he will then be able to use his total company control to sell the whole company for a premium to an undisclosed external buyer.

The way this danger can be managed and partially mitigated by a court is to have an explicit sale price adjustment provision built in to any mandatory share sale price or to allow the same result to be achieved implicitly, by allowing party B who sold the minority shares too cheaply to return to court to seek a price adjustment and redress.

See e.g. Spillman A: "Post-Closing Purchase Price Adjustments in Mergers and Acquisitions- Here's how both sides to a business acquisition can protect the value of their deal against pre-closing working capital fluctuations" SGRLAW Winter 2017 at https://www.sgrlaw.com/ttl-articles/post-closing-purchase-price-adjustments-in-mergers-and-acquisitions/ and

Tilsley G: "US/UK M&A: Price Adjustment Mechanisms - The Locked Box" Lewis Silkin September 2021 at https://www.lewissilkin.com/en/insights/us-uk-ma-price-adjustment-mechanisms--the-locked-box

[10] Relative information asymmetries between the parties if maintained lead to obvious opportunities for such transactions to take place at agreed but unfair prices and direct analogies with insider trading, where either i) informed buyer A may buy at an unfairly low price from less informed seller B, when A has differential insider knowledge that the equity value will rise and so is currently undervalued or ii) when informed seller B may sell at an unfairly high price to less informed buyer A, when B has differential insider knowledge that the equity value will fall and so is currently overvalued.

[11] An example of this could be if the share seller B who decreases her shareholding from minority to zero, knows that the company value will soon fall to zero e.g. through the loss of contingent assets or a realization of contingent liabilities. A concrete example could be if the seller knows of a hidden hole in the company accounts that has not yet been discovered, but that will destroy estimated fair company value.

Finally, mutatis mutandis, the implication of including or excluding these additional valuation factors for corresponding ultra-high value post M&A disputes is also considered.[12]

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The way this danger can be managed and partially mitigated by a court is to have an explicit sale price adjustment provision built in to any mandatory share sale price or to allow the same result to be achieved implicitly, by allowing party A who bought the minority shares too expensively to return to court to seek a price adjustment and redress.

[12] The results discussed below also all apply mutatis mutandis to much larger M&A transactions where the old minority shares seller and exiting owner is replaced by the acquired target company, and the old minority shares buyer and remaining totality owner, is replaced by the acquiring company.

N.B. Subsequent disagreements about what was the fair transaction price and whether accounting and valuation information provided was accurate and the scope and accuracy of accounting and valuation representations and warranties given particularly by the target company are typical material for ultra-high value post-M&A court and arbitration disputes, in the author's experience.

See e.g. Macey-Dare, Rupert, Elon's Unhappy Twitter Meal - Big MAC Spam with Reduced mDAU (August 17, 2022). Available at SSRN: https://ssrn.com/abstract=4192705

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Some Illustrative Scenarios in Appendix 1

These propositions can be illustrated using an example demonstration model and plausible alternative model scenarios.

Scenario 1- Simple Baseline Model

This scenario assumes a company, pre-buyout, with $100 of assets and $0 debt, and no contingent assets or liabilities, so worth $100 and with equity value of $100.

It assumes that there are 10 shares each of the same class, 9 held by the majority shareholder A, 1 held by minority shareholder B. Assuming that no discounts or premia of any type are applicable to the minority shareholding, then each majority share is worth $10, each minority share is worth $10. The majority shareholding held initially by A is worth $90 and the minority shareholding held initially by B is worth $10.

If majority shareholder A uses the company assets to buy B's shareholding of 1 share from B for $10, then B will be left with 0 shares and $10 cash asset. Meanwhile A will be left with 10 shares, now each worth $9 each. A will have totality share ownership in the company now worth $90.

So there will be no change in the value of the assets held by A or B before and after the transaction, although the asset mix will have changed. Specifically A will own a correspondingly greater proportion (100% rather than 90%) of a correspondingly lower value company (90% original assets, rather than 100%) worth $90, and B will own a correspondingly lower proportion (0% rather than 10%) of the company but will hold instead $10 cash.

In this scenario there are no additional gains to be allocated in any way to the minority shares buyer A or minority share seller B.

In this example, absent the extra liquidity of cash and extra optionality of the shares[13], and the different asset mixes, both parties are left in equivalent position before and after the minority shares buyback.

Scenario 2- Minority Discount Applied

This scenario assumes a company, pre-buyout, with $100 of assets and $0 debt, and no contingent assets or liabilities, so worth $100 and with equity value of $100.

It assumes that there are 10 shares each of the same class, 9 held by the majority shareholder A, 1 held by minority shareholder B. However, assuming that a 40% discount is applicable to the minority shareholding, then each minority share being sold is worth $6, so each majority share is worth $10.444. The majority shareholding held initially by A is worth $94 and the minority shareholding held initially by B is worth $6.

If majority shareholder A uses the company assets to buy B's shareholding of 1 share from B for $6, then B will be left with 0 shares and $6 cash asset. Meanwhile A will be left with 10 shares, now each worth $9.4 each. A will have totality share ownership in the company now worth $94.

So there will be no change in the value of the assets held by A or B before and after the transaction, although the asset mix will have changed. Specifically A will own a correspondingly greater proportion (100% rather than 90%) of a correspondingly lower value company (94% original assets, rather than 100%) worth $94, and B will own a correspondingly lower proportion (0% rather than 6%) of the company but will hold instead $6 cash.

In this example, absent the extra liquidity of cash and extra optionality of the shares, and the different asset mixes, both parties are left in equivalent position before and after the minority shares buyback.

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[13] In this example these 2 factors, the extra liquidity of cash and extra optionality of the shares are assumed, without loss of illustrative generality, to offset each other.

One might well object that this is not a fair transaction price because B's share pre-buyout was worth $6 and later sold for $6, whereas post buyout it is clearly worth $9.4, being fungible with any of the other shares.

However this would ignore the point that any gain in the value of the 1 share bought by buyer A also has to be offset against the exactly offsetting diminution in the value of A's original majority shareholding.

For this reason a fair market transaction price for the buyout of the minority shareholding, where a minority share value discount applies, is to incorporate that discount into the share purchase price.

In this scenario there are also no additional gains to be allocated in any way to the minority shares buyer A or minority share seller B.

Scenario 3- Richer Asset and Liability Mix + Range of Discounts and Premia

This scenario assumes a company, pre-buyout, with a richer asset and liability mix including: $110 of non-contingent assets, and a 20% probability of contingent assets being worth $50, otherwise worth zero. So the expected value of total company assets is worth $120.

This scenario also assumes a company, pre-buyout, with $0 of non-contingent debt, and a 20% probability of contingent debts being worth $100, otherwise worth zero[14]. So the expected value of total company debts is worth -$20.

So the total equity value is $120 total assets minus $20 total debts, equals $100.

The scenario also assumes that there are 10 shares each of the same class, 9 held by the majority shareholder A, 1 held by minority shareholder B.

The following additional discounts and premia are now also assumed to apply: a

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[14] In the real world contingent assets and liabilities do not need to have binary payoffs and fixed payoff times, but can have broad payoff distributions across broad payoff periods. This is just a simple example for ease of exposition, but without loss of broader generality.

-40% discount for the minority shareholding[15] [16], a -10% extra fire-sale discount[17], a 20% premium for share buybacks[18], and a 20% reticent seller premium[19], together giving a composite -10% combined total discount to pro rata value.[20]

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[15] The idea of a minority shareholding discount is that a purchaser buying a minority stake, would not be buying company control, because of their likely outvoted minority shareholding company voting rights. This in turn would be likely to reduce the ability of the new minority shareholder to realize the pro rata value of their new shareholding asset, and so reduce the equilibrium price that they would pay for this. By a similar argument the hold-not-sell price for a similar existing minority shareholder would also be reduced by a similar minority shareholder discount.

See e.g. Morris L, Strickland A: "Minorities and other discounts for family companies" ICAEW seminar 9 June 2020 at https://www.icaew.com/-/media/corporate/files/technical/corporate-finance/valuation/valuation-webinars/399---2294300-minorities-and-other-discounts-for-family-companies.ashx

[16] Under English Law, the potential "unfair prejudice" and discrimination that can be faced by minority shareholders, with respect to majority shareholders is recognized and allowed to be challenged in court under s.994 of the Companies Act 2006: "Petition by company member [re: unfair prejudice]" see: https://www.legislation.gov.uk/ukpga/2006/46/section/994 , but clearly there could be significant costs to any attempted enforcement by a minority shareholder, with only partial prospects of success depending on the circumstances, and so many instances of unfair prejudice damaging the interests of minority shareholders will inevitably go unremedied and impose expected additional costs and shareholding value reduction on the minority shareholder.

See also: Blakeley D: "Unfair prejudice – A quick guide" Clarion December 2020 at https://www.clarionsolicitors.com/articles/unfair-prejudice-a-quick-guide

[17] If there is a fire-sale price e.g. an urgent auction sale by a desperate seller to an unwilling buyer market then the seller will usually have to drop the price by a fire-sale discount to achieve the sale.

See e.g. Wikipedia: "Fire sale" 2023 at https://en.wikipedia.org/wiki/Fire_sale

[18] Share buyback programmes of listed and traded equity, which are easily observable, may need to be at a significant premium to the market trading price, to tempt reticent buyers and to mobilize a significant proportional block of sellers.

See e.g. Chen A, Obizhaeva O: "STOCK BUYBACK MOTIVATIONS AND CONSEQUENCES- A LITERATURE REVIEW" CFA Institute Research Foundation 2022 at https://www.cfainstitute.org/-/media/documents/book/rf-lit-review/2022/rflr-stock-buybacks.pdf

[19] A reticent seller premium can come from status quo bias or a holdout or random strip premium or lottery ticket premium, where the original owner just does not like changing their situation or wants to extract the fully geared optional value of their small shareholding rights or wants to keep their shareholding just in case it provides a big future random payoff.

See e.g. Wikipedia: "Ransom strip" 2023 at https://en.wikipedia.org/wiki/Ransom_strip and

Wikipedia: "Status quo bias" 2023 at https://en.wikipedia.org/wiki/Status_quo_bias and

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So in this scenario 3, including both non-contingent and contingent assets and liabilities, total company value on an expected company basis is $100 and total discounts/ premia applicable to the minority share sale are -10% discount.

There are 10 shares total, with 9 shares being held pre-buyout by majority shareholder and share buyer A and 1 share being held pre-buyout by minority shareholder B. Then each minority share being sold is worth $9, so each majority share is worth $10.1111. The majority shareholding held initially by A is worth $91 and the minority shareholding held initially by B is worth $9.

If majority shareholder A uses the company assets to buy B's shareholding of 1 share from B for $9, then B will be left with 0 shares and $9 cash asset. Meanwhile A will be left with 10 shares, now each worth $9.1 each. A will have totality share ownership in the company now worth $91.

So there will be no change in the value of the assets held by A or B before and after the transaction, although the asset mix will have changed. Specifically A will own a correspondingly greater proportion (100% rather than 90%) of a correspondingly lower value company (91% original assets, rather than 100%) worth $91, and B will own a correspondingly lower proportion (0% rather than 9%) of the company but will hold instead $9 cash.

In this example, absent the extra liquidity of cash and extra optionality of the shares, and the different asset mixes, both parties are left in equivalent position before and after the minority shares buyback, before we take into consideration any expected changes in value of the company immediately post-buyout.

Bar-Hillel M, Neter E: "Why Are People Reluctant to Exchange Lottery Tickets?" Journal of Personality & Social Psychology 1996 Vol 70 at http://web.mit.edu/curhan/www/docs/Articles/biases/Bar-Hillel_Neter_Exchange_Lottery_Tickets.pdf

[20] N.B. These percentages and exact categories of applicable discounts and premia are for illustrative purposes and will vary on a case by case and chosen granularity of modelling basis.

However in this scenario, there are also no expected changes in value of the company immediately post-buyout and so the fair market buyout price is $9 per share[21].

Scenario 4- Company Value Rises

This scenario assumes the same basic setup as scenario 3 but with the major difference that the minority share buyout now leads to an immediate jump up in total company equity value, from 100 to 121.

This occurs in the scenario with a rise in the expected value of total assets from 120 to 140, with an increase in non-contingent asset value from $110 to $120 and an increase in contingent asset values from a 20% probability of $50 value to 20% probability of $100 value.

This also occurs in the scenario with a net decrease in the expected value of total liabilities from -20 to -19, with an increase in non-contingent liability value from $0 to -$9 and a dominating decrease in contingent liability expected value from 20% probability of -$100 to 10% probability of -$100.

At one extreme, if this extra jump of $21 in company value from $100 to $121 is all captured by the shares buyer A, then the total value of the company ex post of $121 is $30 more than the value of A's majority shareholding before the share purchase, hence A has gained $30 in extra value from the transaction. By contrast, B will be left with $9 cash instead of his original share fair valued at $9, so B will have gained $0 in extra value from the transaction.

At the other extreme, if this extra jump of $21 in company value from $100 to $121 is all captured by the shares seller B, then B will be left with $39 cash instead of his original share fair valued at $9, so B will have gained $30 in extra value from the transaction. Whereas the residual value of the company having paid out $39 cash to B will be $91, so A the new 100% owner of the company, will have gained $0 in extra value from the transaction.

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[21] See discussion of previous scenario for reasoning why the fair market buyout price is $9 per share, rather than $9.1 per share.

These polar extremes create a potential fair market zone of potential agreement (ZOPA) between the parties, depending on how the extra value generated by the share sale transaction is shared out between the parties, that ranges from $9 per share (i.e. at a net minority discount below the $10 per share pro rata figure) up to $39 per share (i.e. at a huge premium (here of 290%) to the $10 per share pro rata figure[22].[23] N.B. The mid-point of this ZOPA range of $9 to $39, i.e. $24 would also be at a significant premium to the pro rata initial share valuation, suggesting that benefits of a minority share sale that boosted the company valuation could reasonably be shared between the 2 parties.

Scenario 5- Company Value Falls

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[22] This scenario shows how a significant jump in the value of the company acting through any combination of non-continent and contingent company asset and liability channels, could be reflected fully, partially or not at all in the agreed sale price for the minority share purchase.

One polar example could be a "ransom-strip" type case, where the minority share seller is explicitly and knowingly holding up a highly profitable whole company sale. In this case the minority share seller might be able to appropriate all or most of this expected jump in company value and so to sell the minority share stake at a high premium compared with the pro rata share valuation.

Another polar example could be the case where the minority shares buyer A, also has a secret whole company premium buyer lined up. In this case the case the minority shares buyer might be able to appropriate all or most of this expected jump in company value and so to buy the minority share stake at the pro rata share valuation or even a minority discount. This is analogous to the case where an agent buys a secretly valuable painting at auction for a secret wealthy bidder at undervalue, or where they have a for a secret wealthy bidder lined up for subsequent on-sale.

See e.g. Macey-Dare, Rupert, Short Note on Chardin's 'le Bénédicité' and Mitigating Risks of 'Sale at Undervalue' and 'Purchase at Overvalue' for Prospective Sellers and Buyers of Complex High Value and Art Assets (June 26, 2023). Available at SSRN: https://ssrn.com/abstract=4491749

N.B. To help protect the minority share seller's interests against this latter case, where the minority share buyer has a strong perverse incentive not to reveal or share the benefit of the imminent future whole company sale, and where the majority shareholder may have special proprietary knowledge, one solution is to have a price adjustment clause in the sale price of the minority shares to reflect subsequent company share sale prices, and another, as used in English family court divorce cases, is to allow the minority share price seller to return to court if needed to get a suitable ex post price adjustment. See discussion above.

[23] Additionally, the reason why future company valuation changes can have such a huge impact on the fair valuation of the minority shares being sold, is because the change in future company value is all scaled by the total number of shares and share valuation, but this change in valuation can be attributable to and captured by just the very small proportion of minority shares being sold. This can act as a huge price amplifier mechanism for the fair price of the minority shares being sold, making them a form of super-equity.

This scenario assumes the same basic setup as scenario 3 but now with the major difference that the minority share buyout leads to an immediate fall in total company equity value, before any distributions, from 100 to 66.

This occurs in the scenario with a fall in the expected value of total assets from 120 to 105, with an decrease in non-contingent asset value from $110 to $100 and a decrease in contingent asset values from a 20% probability of $50 value to 10% probability of $50 value.

This also occurs in the scenario with a net increase in the expected value of total liabilities from -20 to -39, with an increase in non-contingent liability value from $0 to -$9 and an increase in contingent liability expected value from 20% probability of -$100 to 30% probability of -$100.

At one extreme, if this extra fall of -$34 in company value from $100 to $66 is all allocated to the shares buyer A, then the total value of the company ex post of $66 is -$25 less than the value of A's majority shareholding before the share purchase, hence A has lost -$25 in value from the transaction. By contrast, B will be left with $9 cash instead of his original share fair valued at $9, so B will have gained $0 in extra value from the transaction.

At the other extreme, if this extra fall of -$34 in company value from $100 to $66 is all allocated to shares seller B, then B will be left with a charge of -$16 instead of his original share fair valued at $9, so B will have lost -$25 in value from the transaction. Whereas the residual value of the company having received $16 extra cash charge from B will be $91, so A the new 100% owner of the company, will have gained $0 in extra value from the transaction.

These polar extremes create a potential fair market zone of potential agreement (ZOPA) between the parties, depending on how the extra loss generated by the share sale transaction is shared out between the parties, that ranges from $9 per share (i.e. at a marginal net minority discount below the $10 per share pro rata figure) up to -$16 per share (i.e. at a huge discount (here of -160%) to the $10 per share pro rata figure. N.B. The mid-point of this ZOPA range of $9 to $-16, i.e. -$3.5 would also be at a very significant discount to the pro rata initial share valuation,

suggesting that corporate damage of a minority share sale that damaged the company valuation could reasonably be shared between the 2 parties.[24]

References

Bar-Hillel M, Neter E: "Why Are People Reluctant to Exchange Lottery Tickets?" Journal of Personality & Social Psychology 1996 Vol 70 at http://web.mit.edu/curhan/www/docs/Articles/biases/Bar-Hillel_Neter_Exchange_Lottery_Tickets.pdf

Blakeley D: "Unfair prejudice – A quick guide" Clarion December 2020 at https://www.clarionsolicitors.com/articles/unfair-prejudice-a-quick-guide

Chen A, Obizhaeva O: "STOCK BUYBACK MOTIVATIONS AND CONSEQUENCES-A LITERATURE REVIEW" CFA Institute Research Foundation 2022 at https://www.cfainstitute.org/-/media/documents/book/rf-lit-review/2022/rflr-stock-buybacks.pdf

Companies Act 2006 s.994: "Petition by company member [re: unfair prejudice]" see: https://www.legislation.gov.uk/ukpga/2006/46/section/994

Damodaran A: "Damodaran on Valuation: Security Analysis for Investment and Corporate Finance: 324 (Wiley Finance) Hardcover – Illustrated, 22 Aug. 2006 at https://www.amazon.co.uk/Damodaran-Valuation-Security-Investment-Corporate/dp/0471751219

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[24] The sort of cases where a scenario 5 type situation could occur would include where the exiting minority shareholder was strongly linked to the IP maintenance or reputation or existing customer base of the company and where this shareholder's exit could lead to significant reductions in demand or supply through any of these channels, that could not be easily replaced in a timely way.

To prevent this happening as much as possible, there can be additional lock-in employment and IP deals, no-poach and non-compete agreements, within legal constraints, and no disclosure and no reputational damage agreements between the parties. These essentially motivate the exiting shareholder to be a "good leaver" ex post with respect to the company and remaining shareholder.

Damodaran A: "Dark Side of Valuation, The: Valuing Young, Distressed, and Complex Businesses: Valuing Young, Distressed, and Complex Businesses" Pearson FT Press; 3rd edition Paperback – 4 May 2018, at https://www.amazon.co.uk/Dark-Side-Valuation-Distressed-Businesses/dp/0134854101/ref=pd_bxgy_img_sccl_2/260-6717678-2787530

Lillo F: "Order flow and price formation" Arxiv.org 4 May 2021 at https://arxiv.org/pdf/2105.00521.pdf

McKinsey & Company Inc, Koller T, Goedhart M, Wessels D: "Valuation: Measuring and Managing the Value of Companies (Wiley Finance) Hardcover – 6 Aug. 2020 at https://www.amazon.co.uk/Valuation-Measuring-Managing-Companies-Finance/dp/1119610885/ref=pd_bxgy_img_sccl_1/260-6717678-2787530

Macey-Dare, Rupert, Elon's Unhappy Twitter Meal - Big MAC Spam with Reduced mDAU (August 17, 2022). Available at SSRN: https://ssrn.com/abstract=4192705

Macey-Dare, Rupert, Short Note on Chardin's 'le Bénédicité' and Mitigating Risks of 'Sale at Undervalue' and 'Purchase at Overvalue' for Prospective Sellers and Buyers of Complex High Value and Art Assets (June 26, 2023). Available at SSRN: https://ssrn.com/abstract=4491749

Merino M: "UNDERSTANDING ZOPA: THE ZONE OF POSSIBLE AGREEMENT" Harvard Business School Online 14 September 2017 at https://online.hbs.edu/blog/post/understanding-zopa

Morris L, Strickland A: "Minorities and other discounts for family companies" ICAEW seminar 9 June 2020 at https://www.icaew.com/-/media/corporate/files/technical/corporate-finance/valuation/valuation-webinars/399---2294300-minorities-and-other-discounts-for-family-companies.ashx

OECD (2022), OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 2022, OECD Publishing, Paris, https://doi.org/10.1787/0e655865-en

Royal Institution of Chartered Surveyors: "RICS Valuation – RED BOOK GLOBAL STANDARDS, Global Standards Effective from 31 January 2022" January 2022 at

https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/red-book/red-book-global

Spillman A: "Post-Closing Purchase Price Adjustments in Mergers and Acquisitions-Here's how both sides to a business acquisition can protect the value of their deal against pre-closing working capital fluctuations" SGRLAW Winter 2017 at https://www.sgrlaw.com/ttl-articles/post-closing-purchase-price-adjustments-in-mergers-and-acquisitions/

Tilsley G: "US/UK M&A: Price Adjustment Mechanisms - The Locked Box" Lewis Silkin September 2021 at https://www.lewissilkin.com/en/insights/us-uk-ma-price-adjustment-mechanisms--the-locked-box

Wikipedia: "Fire sale" 2023 at https://en.wikipedia.org/wiki/Fire_sale

Wikipedia: "Goodwill" 2023 at https://en.wikipedia.org/wiki/Goodwill_(accounting)

Wikipedia: "Ransom strip" 2023 at https://en.wikipedia.org/wiki/Ransom_strip

Wikipedia: "Status quo bias" 2023 at https://en.wikipedia.org/wiki/Status_quo_bias

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How to Estimate Fair Market Valuation for Court-Ordered Minority Shareholding Buybacks

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Fair-value pricing of minority shareholding buyback to 100%- under various expected ex ante and ex post scenarios
RMD2023 Printed: 31/08/2023 10:52

Baseline Scenario: 1

No change company value, after buyback costs, no contingent assets or liabilities, no premia or discounts

ZOPA for minority share price

Max	10
Ave	10
Min	10

Item	Before Minority Shareholding Buyback to 100%	After Buyback (all gains to buyer)	Expected change	After Buyback (all gains to buyer)	Expected change
Total non-contingent assets (pre buyout)	100	100	0	100	0
Total contingent assets (excluding pure buyout related)	0	0	0	0	0
Prob asset contingency occuring	0% 0	0% 0	0	0.00% 0	0
Total company assets (pre buyout)	100	100	0	100	0
Total non-contingent debts (excluding pure buyout related)	0	-10	-10	-10	-10
Total contingent debts (pre buyout)	0	0	0	0	0
Prob debt contingency occuring	0% 0	0% 0	0	0% 0	0
Total debt value (pre buyout)	0	-10	-10	-10	-10
Total Company equity value	100	90	-10	90	-10
	Realizable value	Realizable value		Realizable value	
Maj shares	9 90	10 0	1	10 0	1
Min shares	1 10	0	-1	0	-1
Total shares	10	10	0	10	0
Ave share value	10	9		9	

Discounts/premia	
Minority share discount	0%
Firesale discount	0%
Share Buyback Premium	0%
Status Quo Change Premium	0%
Total discounts/premia	0%
Minority single share value	10.00
Majority single share value	10

		Gain from transaction			Gain from transaction
Majority shareholder value	90	Value of totality shareholding 90 — 0 Majority/ totality shareholder		Value of totality shareholding 90 — 0 Majority/ totality shareholder	
Purchase value of min share	10	Value of zero shareholding 0		Value of zero shareholding 0	
		Former minority cash gain 10 — 0 Minority to zero shareholder		Former minority cash gain 10 — 0 Minority to zero shareholder	

Scenario: 2

No change company value, after buyback costs, no contingent assets or liabilities, but with minority share discount

ZOPA for minority share price

Max	6
Ave	6
Min	6

Item	Before	After #1	Exp change	After #2	Exp change
Total non-contingent assets (pre buyout)	100	100	0	100	0
Total contingent assets (excluding pure buyout related)	0	0	0	0	0
Prob asset contingency occuring	0% 0	0% 0	0	0.00% 0	0
Total company assets (pre buyout)	100	100	0	100	0
Total non-contingent debts (excluding pure buyout related)	0	-6	-6	-6	-6
Total contingent debts (pre buyout)	0	0	0	0	0
Prob debt contingency occuring	0% 0	0% 0	0	0% 0	0
Total debt value (pre buyout)	0	-6	-6	-6	-6
Total Company equity value	100	94	-6	94	-6
	Realizable value	Realizable value		Realizable value	
Maj shares	9 94 10.44444	10 0	1	10 0	1
Min shares	1 6	0	-1	0	-1
Total shares	10	10	0	10	0
Ave share value	10	9.4		9.4	

Discounts/premia	
Minority share discount	-40%
Firesale discount	0%
Share Buyback Premium	0%
Status Quo Change Premium	0%
Total discounts/premia	-40%
Minority single share value	6.00
Majority single share value	10.44444444

		Gain from transaction		Gain from transaction
Majority shareholder value	94	Value of totality shareholding 94 — 0 Majority/ totality shareholder	Value of totality shareholding 94 — 0 Majority/ totality shareholder	
Purchase value of min share	6	Value of zero shareholding 0	Value of zero shareholding 0	
		Former minority cash gain 6 — 0 Minority to zero shareholder	Former minority cash gain 6 — 0 Minority to zero shareholder	

Scenario: 3

No change company value, but with contingent assets and liabilities, and with various share discounts and premia

ZOPA for minority share price

Max	9
Ave	9
Min	9

Item	Before	After #1	Exp change	After #2	Exp change
Total non-contingent assets (pre buyout)	110	110	0	110	0
Total contingent assets (excluding pure buyout related)	50	50	0	50	0
Prob asset contingency occuring	20% 10	20% 10	0	20.00% 10	0
Total company assets (pre buyout)	120	120	0	120	0
Total non-contingent debts (excluding pure buyout related)	0	-9	-9	-9	-9
Total contingent debts (pre buyout)	-100	-100	0	-100	0
Prob debt contingency occuring	20% -20	20% -20	0	20% -20	0
Total debt value (pre buyout)	-20	-29	-9	-29	-9
Total Company equity value	100	91	-9	91	-9
	Realizable value	Realizable value		Realizable value	
Maj shares	9 91	10 0	1	10 0	1
Min shares	1 9	0	-1	0	-1
Total shares	10	10	0	10	0
Ave share value	10	9.1		9.1	

Discounts/premia	
Minority share discount	-40%
Firesale discount	-10%
Share Buyback Premium	20%
Status Quo Change Premium	20%
Total discounts/premia	-10%
Minority single share value	9.00
Majority single share value	10.11111111

		Gain from transaction		Gain from transaction
Majority shareholder value	91	Value of totality shareholding 91 — 0 Majority/ totality shareholder	Value of totality shareholding 91 — 0 Majority/ totality shareholder	
Purchase value of min share	9	Value of zero shareholding 0	Value of zero shareholding 0	
		Former minority cash gain 9 — 0 Minority to zero shareholder	Former minority cash gain 9 — 0 Minority to zero shareholder	

Scenario: 4

Increase in company value, after buyback costs, and with contingent assets and liabilities, and with various share discounts and premia

ZOPA for minority share price

Max	39
Ave	24
Min	9

Item	Before	After #1	Exp change	After #2	Exp change
Total non-contingent assets (pre buyout)	110	120	10	120	10
Total contingent assets (excluding pure buyout related)	50	100	50	100	50
Prob asset contingency occuring	20% 10	20% 20	0	20.00% 20	0
Total company assets (pre buyout)	120	140	20	140	20
Total non-contingent debts (excluding pure buyout related)	0	-9	-9	-39	-9
Total contingent debts (pre buyout)	-100	-100	0	-100	0
Prob debt contingency occuring	20% -20	10% -10	-0.1	10% -10	-0.1
Total debt value (pre buyout)	-20	-19	1	-49	1
Total Company equity value	100	121	21	91	21
	Realizable value	Realizable value		Realizable value	
Maj shares	9 91	10 0	1	10 0	1
Min shares	1 9	0	-1	0	-1
Total shares	10	10	0	10	0
Ave share value	10	12.1		9.1	

Discounts/premia	
Minority share discount	-40%
Firesale discount	-10%
Share Buyback Premium	20%
Status Quo Change Premium	20%
Total discounts/premia	-10%
Minority single share value	9
Majority single share value	10.11111111

		Gain from transaction		Gain from transaction
Majority shareholder value	91	Value of totality shareholding 121 — 30 Majority/ totality shareholder	Value of totality shareholding 91 — 0 Majority/ totality shareholder	
Purchase value of min share	9	Value of zero shareholding 0	Value of zero shareholding 0	
		Former minority cash gain 9 — 0 Minority to zero shareholder	Former minority cash gain 39 — 30 Minority to zero shareholder	

Scenario: 5

Decrease in company value, after buyback costs, and with contingent assets and liabilities, and with various share discounts and premia

ZOPA for minority share price

Max	-16
Ave	-3.5
Min	9

Item	Before	After #1	Exp change	After #2	Exp change
Total non-contingent assets (pre buyout)	110	100	-10	100	-10
Total contingent assets (excluding pure buyout related)	50	50	0	50	0
Prob asset contingency occuring	20% 10	10% 5	-0.1	10.00% 5	-0.1
Total company assets (pre buyout)	120	105	-15	105	-15
Total non-contingent debts (excluding pure buyout related)	0	-9	-9	16	-9
Total contingent debts (pre buyout)	-100	-100	0	-100	0
Prob debt contingency occuring	20% -20	30% -30	0.1	30% -30	0.1
Total debt value (pre buyout)	-20	-39	-19	-14	-19
Total Company equity value	100	66	-34	91	-34
	Realizable value	Realizable value		Realizable value	
Maj shares	9 91	10 0	1	10 0	1
Min shares	1 9	0	-1	0	-1
Total shares	10	10	0	10	0
Ave share value	10	6.6		9.1	

Discounts/premia	
Minority share discount	-40%
Firesale discount	-10%
Share Buyback Premium	20%
Status Quo Change Premium	20%
Total discounts/premia	-10%
Minority single share value	9
Majority single share value	10.11111111

		Gain from transaction		Gain from transaction
Majority shareholder value	91	Value of totality shareholding 66 — -25 Majority/ totality shareholder	Value of totality shareholding 91 — 0 Majority/ totality shareholder	
Purchase value of min share	9	Value of zero shareholding 0	Value of zero shareholding 0	
		Former minority cash gain 9 — 0 Minority to zero shareholder	Former minority cash gain -16 — -25 Minority to zero shareholder	

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