1. Course content and objectives

This is a course on corporate mergers and acquisitions (M&A). Students will develop skills necessary to structure a deal or form an opinion about a proposed transaction. Topics include value creation in mergers; choice of payment method; valuation of contingent payments; deal protection; incentive effects of deal financing; merger arbitrage; defensive tactics; market consensus estimates; and leveraged buyouts. We discuss bidding strategies and takeover tactics. Students get to practice merger negotiations in a team exercise. We also cover the legal and regulatory framework for takeovers, such as filing requirements, fiduciary duties of the target board of directors, and antitrust regulation. The course uses a mix of case analysis, providing ample opportunity to practice the application of standard corporate valuation methods, lectures and visitors.

2. Course requirements

The course grade is based on individual class participation and written team assignments.

I. Class participation – 35 percent of grade

Students are expected to attend every class. You should come prepared to discuss your analysis of the case and to show your calculations. I encourage voluntary participation but may call on any student to discuss the assignment. Class participation is individual effort and is graded after each session on a scale from 0-3. Your grade is based on the total class participation score.

II. Case write-ups – 25 percent of grade

Students will be organized into teams of four. Each team is required to hand in a written case analysis at the beginning of class for either option A or B (at your choice). Students may form teams and submit by email to Beth Perkins by 12 noon on Friday 3/28. All students that are not organized in groups (i.e. that have not emailed Beth) by this deadline will be assigned to a team and notified by 4 pm on the same day.
### III. Merger negotiations – 10 percent of grade

The AT&T/McCaw case is a negotiation exercise that takes place on Monday 5/5. You will be assigned to a two-person team representing one side of the negotiations between AT&T and McCaw. Your team will negotiate the merger with a team from the counterparty. Prior to the negotiations your team should hand in a confidential report outlining your opening price, walk away price and negotiation strategy. After the negotiations you should hand in a report explaining and justifying the outcome of the negotiations.

### IV. Term paper – 30 percent of grade

Students will make a thorough analysis of a potential takeover transaction. You should pick a possible bidder and target, justifying why this target is an attractive acquisition for the bidder. The write-up should provide an analysis of a range of different aspects of the transaction, including the strategic and economic benefits, bid range, type of consideration, bidding strategy, legal and tax aspects, anticipated management reaction, and potential competition. This assignment should be made in groups of 4 students. The term paper is due at the beginning of class on Friday 5/16. A mandatory double session is scheduled from 8:30-12:30 on 5/16 for student presentations of the term projects.

### 3. Visitors

The class will be visited by the following speakers:

- **Stuart M. Cable T’76**
  Partner
  Goodwin Procter LLP

- **Arthur Lindenauer T’59**
  Retired EVP and CFO
  Schlumberger Limited

- **Paul E. Raether T’73**
  General Partner
  Kohlberg Kravis Roberts & Company

- **John Tatum T’05**
  Principal
  H.I.G. Capital

### 4. Course materials

In addition, the course packet contains a number of cases and readings. Further material and detailed descriptions of the assignments will be distributed in class.

5. Supplementary readings


All books are held on reserve at Feldberg Library.

6. Honor code

Students are encouraged to work in groups when preparing for class. The team assignments described under 2 above should not be discussed with other teams. You may not use notes or other material from any previous offering of this or a similar course, or discuss the material with students who have already taken the course. This restriction extends to case-related information obtained from other sources.

7. Laptops

Laptops should be closed during class. Make sure to bring print-outs of any calculations that you may want to refer to in the class discussion. If I see an open laptop during class, you will get a class participation grade of -3 on that day.
## 8. Course overview

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Detailed schedule

STRUCTURING MERGERS AND ACQUISITIONS

1. Bid financing
   Monday 3/24


   Case: Pinkerton (A), HBS 9-291-051.

   Questions:
   1. How much is Pinkerton worth to Wathen? Value Pinkerton using DCF and multiples. What are the different synergies in this deal and what are they worth?
   2. What is the value of Pinkerton under American Brands? How much could other bidders pay for Pinkerton? Are any of the synergies unique to Wathen?
   3. Should Wathen finance the $100 million bid with debt or equity? What debt ratio will the merged firm have if the bid is financed with 75% debt and 100% debt, respectively? Will there be sufficient cash flow to cover the debt payments?
   4. What do you think of the proposed terms for the $25 million equity contribution from the investment firm? Which financing alternative would you recommend to Wathen?

   Note: Some of you may have seen this case in Corporate Finance. While the analysis here goes beyond what you did in the first-year, you are not allowed to consult your old class notes or case solutions. In other words, I expect you to prepare the case from scratch.

   Readings: Gaughan chapters 1 and 2.

2. Value creation in mergers
   Tuesday 3/25


   Case: Chase Manhattan Corporation: The making of America’s largest bank, HBS 9-298-016.

   Case questions:
   1. Chemical and Chase are attempting to reduce their costs by merging. This approach (“bigger is better”) represents a sharp contrast to the refocusing and downsizing which has characterized much of US restructuring in recent years. Do you think the interest of the banks’ shareholders and other constituencies would be better served by another form of restructuring that instead emphasizes increased corporate focus?
   2. What are the strategic benefits, if any, of combining Chase and Chemical? What is the most significant benefit that the banks will realize from this merger?
   3. What incentives are there for the two management teams to support this merger?
   4. Should Chemical reconsider any of its other prospective merger partners?
   5. Assuming that all the anticipated benefits from the merger are realized, what is the likely dollar impact of the merger on the combined wealth of Chase and Chemical common stockholders? How will the merger affect the banks’ financial performance (e.g. as measured by return on equity)? How would you measure the success of this transaction? Use an equity beta for bank common stock of 1.25 and a 10-year US Treasury Bond rate of 6.4%.
6. How would you determine the share exchange rate? If you were Chemical management, what exchange ratio would you seek for the merger? What if you were Chase management? Is the exchange rate a deal breaker or are there other features of the transaction that you might adjust?

Readings: Gaughan pages 100-115 and chapter 4.

3. Method of payment
Monday 3/31


Case: Cooper Industries, Inc. HBS 9-274-116.

Questions:
1. If you were Mr. Cizik of Cooper Industries, would you try to gain control of Nicholson File Company in May 1972? What makes the target an attractive candidate for Cooper? Is it a good strategic fit?
2. What is the maximum price that Cooper can afford to pay for Nicholson? Do a DCF valuation of Nicholson using a WACC of 10%. What are the potential synergies worth? What do you make of Nicholson's inventory?
3. What exchange ratio can Cooper offer before the acquisition has a dilutive effect on Cooper’s earnings per share (EPS)? Is it important to consider the impact of an acquisition on EPS? How can decisions based on EPS go wrong?
4. Is it feasible for Cooper to pay with cash or debt finance a cash bid? How does cash consideration impact EPS?
5. Assume that on March 2, the day before Porter’s offer, Cooper stock closed at $22 and Nicholson stock at $30. Moreover, assume that Cooper on the evening of May 3 offers Nicholson shareholders an exchange ratio of 2.0, i.e. 2 Cooper shares per Nicholson share. If the acquisition goes through, what percentage of the new company will be owned by Cooper’s former shareholders? What acquisition premium is Cooper offering? What are the minimum synergies required for this offer to make sense for Cooper’s shareholders?
6. What are the concerns and what is the bargaining position of the each group of Nicholson stockholders? What must Cooper offer different shareholders in order to acquire their shares?

Readings: Gaughan chapter 14 and 15.

4. Contingent considerations
Tuesday 4/1


Case: General Mills’ acquisition of Pillsbury from Diageo Plc., UVA-F-1326.
Case questions:
1. What are General Mills’ motives for this deal? Estimate the present value of the expected cost savings.
2. Why was the contingent value right (CVR) included in this transaction? How does the claw-back affect the attractiveness of the deal from the standpoints of General Mills and Diageo? How is an earnout different from a CVR, and in what situation should one or the other be used?
3. How does the contingent payment work? Draw a payoff diagram (a hockey stick diagram) of the claw-back feature. What option positions should you take to create the same payoff?
4. What is the contingent payment worth when the deal is negotiated in July 2000? What is it worth when shareholders vote on the deal in early December 2000? Use a Black-Scholes calculator e.g. from CapMarkets.
5. Is this deal economically attractive to General Mills’ shareholders? Would you recommend that shareholders approve or reject the deal?
6. What can the bidder do to protect its shareholders from stock price fluctuations before the deal is closed? How can the target protect its shareholders?


5. Incentive effects of deal financing
Monday 4/7

Control compensation payments. Convertible bonds as deal financing. Voting and trading incentive effects.

Case: AXA MONY, HBS 9-208-062.

Case questions:
1. Why is AXA bidding for MONY? Does the deal make sense for AXA; for MONY shareholders; and for management? As a MONY shareholder, what concerns would you have about the deal?
2. How did AXA finance the takeover bid? Explain the structure that AXA used. Why did AXA use this structure? What effects, if any, do you think this method of financing has on the likelihood of the deal succeeding?
3. How would you price the ORAN at issue? Is it fairly priced? What does the price of the ORAN on February 9, 2003, imply for the probability of the deal succeeding? What is the fair price of MONY stock?
4. Suppose that you hold a position in the ORAN on February 9. Would you want to buy or sell MONY stock (a) at the “fair” price calculated in question 3 above or (b) at the market price of $31.55? How do you explain the price of MONY stock on February 9?
5. Suppose that you manage a $2bn hedge fund with a significant stake in MONY and that on February 10 you receive a phone call asking to buy your stock at above the market price if you sign over the voting rights with the shares. What considerations would enter into your decision about whether to sell you MONY stock at $31.55 on February 9?

Readings: Gaughan chapter 8.
6. Legal and regulatory issues
Tuesday 4/8
Visitor: Stuart M. Cable T*76, Partner, Goodwin Procter LLP
Readings: Gaughan chapters 3 and 12.

7. Leveraged buyouts
Monday 4/14
Value creation in leveraged buyouts: financial structure, earnouts, asset vs. stock purchase.
Case: Brazos Partners: The CoMark LBO, HBS 9-202-090
Case questions:
1. What is Brazos’ strategy? How is it differentiated from that of other buyout funds? What is the GTT (Generation Transfer Transaction)?
2. Why would CoMark be a good candidate for a leveraged buyout? What do you think of this opportunity?
3. How did Brazos make itself comfortable with the transaction while other funds passed? What does the planned financial structure look like?
4. Why does CoMark’s management need Brazos? Why don’t they simply make a leveraged recap?
5. What do you think of the $40 million price for CoMark? Value CoMark using multiples and the APV method.
6. What are the issues with asset purchase vs. stock purchase? Analyze the tradeoff between the two methods.
Readings: Gaughan chapters 7.
Technical note on structuring and valuing incentive payments in M&A: Earnouts and other contingent payments to the seller, UVA-F-1322.

8. Structuring the acquisition
Tuesday 4/15
Identifying and bidding for a target, structuring the deal
Visitor: Paul E. Raether T’73, General Partner, KKR

9. Evaluating and responding to a bid
Monday 4/21
Case: Time Inc.’s entry into the entertainment industry, HBS 9-293-117. B-case, HBS 9-293-133, will be distributed in class.
Case questions:
1. How attractive is the merger of Time with Warner? What are the value enhancement opportunities? What do you think of the proposed exchange ratio of 0.465 per Warner share? How much synergy is needed to make the merger attractive?
2. What are the motivations of the two management teams to support the merger?
3. What prompted Paramount’s interest in Time?
4. Why are the investment bankers’ valuations so much higher than the market values? What legal, financial, and restructuring options does Time have to combat the Paramount bid? To ensure that it is not a target in the future?
5. What would you do as Mr. Munro? How would you explain a decision to reject the Paramount offer at the annual shareholders’ meeting?

Readings: Bower, Joseph L., 2001, Not all M&As are alike and that matters, Harvard Business Review (March), reprint R0103F.
M&A legal context: Basic framework for corporate governance, HBS 9-803-200, and Standards related to the sale or purchase of a company, HBS 9-904-004.

10. Defensive tactics
Tuesday 4/22
Preventative and reactive defensive strategies.

Case: The Acquisition of Consolidated Rail Corporation (A), HBS 9-298-006, and (B), HBS 9-298-095
Case questions:
1. Why does CSX want to buy Conrail? How much should CSX be willing to pay for it?
2. Why did CSX make a two-tiered offer? What effect does this structure have on the transaction? As a shareholder in Conrail, would you tender you share to CSX at $92.50 in the first stage tender offer? Explain why or why not?
3. What are the economic rationales for and the takeover implications of the various provisions in the merger agreement, e.g. no-talk clause, lock-up options, break-up fee and poison pill shareholder rights plan?
4. Why did Norfolk Southern make a hostile bid for Conrail?
5. How much is Conrail worth? In a bidding war, who should be willing to pay more, Norfolk Southern or CSX?
6. Why does CSX refer to Norfolk Southern’s bid as a “non-bid”? What should Norfolk Southern do as of mid-January 1997?
7. As a shareholder, would you vote to opt-out of the Pennsylvania antitakeover statute? What do the capital markets expect will happen?
8. What are the costs and benefits of regulating the market for corporate control through statutes such as Pennsylvania’s antitakeover law?

Readings: Gaughan chapter 5
M&A legal context: Hostile takeovers, HBS 9-904-005.

11. Takeover bidding strategies
Monday 4/28
Takeover tactics: toeholds, tender offers, and proxy fights.

Case: The Hilton-ITT Wars, UVA-F-1217
Case questions:
1. What is the stand-alone value of ITT? Why is it relevant to look at the break-up value when valuing ITT? How does the stand-alone value compare to ITT’s historical market value? What was ITT’s value to Hilton?
2. Why did Bollenbach open his bidding for ITT at $55 per share? What was his likely strategy? What were his tradeoffs in deciding on this bid?

3. Why did Bollenbach not raise the bid between January and July?

4. What do you expect the price of ITT’s equity would be if Hilton’s bid fails? Would it collapse to its pre-tender offer trading value of around $44; would it remain stable at its existing level of around $60; or would it rise to meet ITT’s share repurchase price of $70?

5. At what bid would risk arbitrageurs be inclined to tender their shares to Hilton? How much do they expect to earn from waiting for a new bid? What other underlying assumptions are you making in drawing this conclusion?

6. How should Bollenbach react to ITT’s trivestiture defense? Should he change the bid or walk away?

Readings: Gaughan chapter 6.

12. Market consensus and overvaluation effects


Case: Vodafone AirTouch’s Bid for Mannesmann, HBS 9-201-096.

Questions:
1. What is the strategic and economic rationale for Mannesmann’s acquisition of Orange? Did Mannesmann overpay for Orange?

2. Vodafone AirTouch offered Mannesmann shareholders 53.7 Vodafone AirTouch shares per Mannesmann share.
   a. Describe the stock swap. What was the market value of Mannesmann’s contribution to the combined firm? As a Mannesmann shareholder, would you accept the current offer? As a Vodafone shareholder, would you support the proposed transaction? Use an average exchange ratio of 1£=€1.5789.
   b. Compute the market estimate on December 17, 1999 of Vodafone AirTouch successfully acquiring Mannesmann. Assume that if the bid fails both firms would trade at the prices prevailing after the announcement of Mannesmann’s acquisition of Orange but prior to rumors of Vodafone AirTouch acquiring Mannesmann.
   c. Assume that the probability of a successful deal is 0.6, what is the market’s estimate of the implied synergies from the deal.
   d. What is the present value of the expected synergies as shown in Exhibit 10 as of March 2000? Assume that the synergies related to revenues and costs grow at 4% annually past 2006, while savings from capital expenditure don’t extend beyond 2006, and that the merger will not affect the firm’s level of working capital.
   e. UK equities returned 7.7% (in pounds) over the UK risk-free rate for the period 1919-1993 and 6.8% over the UK risk-free rate for the period 1970-1996. How might this observation affect the decision of the Vodafone AirTouch shareholders?

3. What hurdles is Vodafone AirTouch going to face to complete its acquisition of Mannesmann? Who is going to be its most likely support? Who is going to resist? Why?

4. Why is Gent so eager to do the deal? Why is Esser fighting so hard?

5. What role do hostile takeovers play? In their absence what mechanisms perform the same function?

13. Merger negotiations
Monday 5/5

Negotiation exercise: negotiating a merger agreement.
Students will be assigned to represent either AT&T or McCaw. Class time will be used for negotiations in small teams. Each team should hand in confidential pre-negotiation and post-negotiation reports.

Case: American Telephone & Telegraph (AT&T): The AT&T/McCaw merger negotiation, UVA-F-1142, or McCaw Cellular Communications: The AT&T/McCaw merger negotiation, UVA-F-1143 (not in course packet).


14. Negotiation strategies
Tuesday 5/6

Merger negotiation debriefing: biases in negotiations, effective negotiation strategies.

Visitor: Arthur Lindenauer T’59, Retired EVP and CFO, Schlumberger Limited


15. Bidding for a subsidiary
Monday 5/12

Analyzing the company, structuring different aspects of the deal, bidding tactics

Visitor: John Tatum T’05, Principal, H.I.G. Capital.

16. Deal structure
Tuesday 5/13

Visitor: TBA

17-18. Term paper presentations
Friday 5/16, 8:30-12:30

Student presentations of term papers. All term papers are due at the beginning of class.

Note: This is a mandatory session that you are required to attend. You should make arrangements early to avoid potential conflicts.