Tentamen Financiering 2.2 19/03/2008 VU University Amsterdam School of Finance

Voer antwoorden op 50 MC vragen in op bijgevoegd antwoordformulier met **duidelijke "ballen"** d.w.z. met ● niet **V** of **.**

Schrijf je naam en je studentennummer **zeer leesbaar** op MC blad.
Indien niet duidelijk, kan het niet machinaal gelezen worden, en **je krijgt dan GEEN cijfer.**

Dus vul je stud. no. NETJES in: een 1 is 1, en geen 7; een 3 is 3, en geen 5 of een 8; een 0 is 0, en geen 6 of 9

Dit is een *"closed book, closed papers, closed neighbour, closed mobile telephone, closed everything"* tentamen.
Alleen een rekenmachine zonder geheugenopslag is toegestaan (en nodig).

De beoordeling van de MC vragen houdt rekening met het "20% gokelement". Vooralsnog dient u 32 (van de 50) goed te beantwoorden voor een 5,5. Hierbovenop komt het eventuele bonuspunt (dat u zelf kunt bepalen, zie mededeling op BB).

Cijfers worden bekend gemaakt op **10 april 2008** (wegens verblijf docent in buitenland). Inzage is op **17 april 2008 van 10.00 tot 11.00 hr. in kamer 1A.33**. De goede antwoorden komen te zijner tijd op BlackBoard. Hierover niet verder de docent mailen, gaarne.

En nogmaals, als je op het MC formulier niet duidelijk markeert met ●, en/of je studentennummer slordig invult .....
→ onleesbaar voor computer → **GEEN cijfer.**

Lever dit tentamen vragenblad ook in; verwijder nietje niet.

1. What has been the average risk premium on large NYSE common stocks between 1926 and 2000:
   a. 13.4%
   b. 9.1%
   c. 2.2%
   d. 11.9%
   e. 7.3%

2. The above risk premium on stocks is measured as the absolute return above the average return of:
   a. money market instruments
   b. Treasury bills
   c. Morgan Stanley Composite Index for stocks
   d. inflation
   e. AAA corporate bonds

3. The Sharpe ratio of a portfolio with a return of 15,3%, volatility of 12,8% (while the risk free rate = 4%) is:
a. 0,88
b. 1,04
c. 1,27
d. 1,03
e. 1,51

4. Given $cov_{1,2}$ = 0,00828, σ_1 = 18,1% , σ_2 = 0,087. What is $\rho_{1,2}$?
a. 0,462
b. 0,472
c. 0,526
d. 0,289
e. 0,011

5. Given: investor with € 1 mln. with R_f = 3%, r_p = 11,0%, σ_p = 12%. How much to borrow to obtain r = 16%:
a. 666.666 (Note: r_p and σ_p refer to the optimal market portfolio)
b. 500.000
c. 1.000.000
d. 750.000
e. 687.500

6. Given: monthly returns of security 1: 10, 12, -5, 8 and security 2: 15, 13, 0, 5 (in %). What is the $cov_{1,2}$?:
a. 0,013975 (Note: above are returns for 4 consecutive months for both securities)
b. 0,003494
c. 0,004658
d. 0,010925
e. 0.002961

7. Which portfolio has the most risk?
a. portfolio of T-bonds
b. portfolio of long term US government bonds
c. Standard and Poor's 500 composite index
d. portfolio of Treasury notes
e. portfolio of money market instruments

8. The capital market line (CML) is the graph of:
a. expected rate of investment (Y-axis) vs. systematic risk
b. systematic risk (Y-axis) vs. rate of return
c. expected return on a portfolio (Y-axis) vs. standard deviation
d. expected rate of return (Y-axis) vs. non-idiosyncratic risk
e. expected rate of return (Y-axis0 VS. idiosyncratic risk

9. Bedrijf ABC geeft road shows voor een IPO. Het heeft nu 100 mln. shares outstanding. Oprichter-aandeelhouders verkopen 22 mln. aandelen. Het bedrijf geeft ook 8 mln. nieuwe aandelen uit. De emitterende banken hebben bovendien een green shoe option op 5 mln. bestaande aandelen; deze oefenen de banken uit. Na de IPO hebben de oude aandeelhouders een belang van hoeveel percent in het bedrijf:
a. 69,0%
b. 78,0%
c. 73,8%
d. 72,0%
e. 67,9%%

10. Company X with market value of 1.000 acquires company B (value before acquisition = 100) with a premium of 25%. It pays the B shareholders 75 from a bond issue and the rest from its cash position. No synergy is assumed. What is the value of X after the acquisition of Y, i.e. NPV of X including Y:
a. 1.125
b. 1.100
c. 1.075
d. 1.050
e. 1.000

11. Een startend bedrijf XYZ heeft een eerste ronde Venture Capital (VC) financing reeds achter de rug en heeft nu opnieuw nieuw kapitaal nodig. Het bedrijf heeft veelbelovende technologie en wordt daardoor gewaardeerd op $ 15 mln. (voordat de emissie plaats vindt). Door grote ontwikkelingsverliezen bedraagt het Eigen Vermogen op de balans nu slechts $ 1 mln. De nieuwe VC company, dat in de tweede ronde financing participeert, is bereid $ 10 mln. in de vorm van aandelenkapitaal te financieren. Wat wordt het belang van de oorspronkelijke eigenaren in het bedrijf na de nieuwe emissie?
a. 60%
b. 66,6%
c. 10%
d. 40%
e. 33,3%

12. Als de balans van XYZ (zie vorige vraag over bedrijf XYZ) <u>voor</u> de nieuwe emissie nu aan de debet zijde een $ 1 mln. machine en lab equipment post vertoont en aan de credit zijde $ 1 mln. Eigen Vermogen ($ 2 mln. Nominaal Kapitaal en -$ 1 mln. Reserves), hoe ziet de complete balans er dan uit ziet <u>na</u> de emissie. Geef de verdeling over de posten Nominaal Kapitaal, Agio en Reserves <u>precies</u> weer:

a.	3 mln.	9 mln.	-1 mln.
b.	3,33	8,67	-1
c.	12	0	-1
d.	4	8	-1
e.	11	0	0

13. Co. A has a P/E of 18, its share price is 20, # shares outstanding = 100 mln.; Co. B has a P/E of 12, its share price is 15, # shares outstanding = 10 mln. A wants to acquire B and offers in an exchange of shares to B shareholders a 25% premium. What is the <u>theoretically</u> expected share price of A after the acquisition, if the P/E stays 18:
a. 20,41
b. 20,34
c. 20,07
d. 20,00
e. 20,24

14. Technische analyse is in tegenspraak tot welke "soort" van de Efficient Market Hypothesis:
a. random walk theory
b. strong form
c. efficiency theory
d. rational behaviour
e. weak form

15. The value of common stock today depends on (aside from "sentiment" and/or "confidence"):
a. number of shares outstanding and the number of shareholders
b. opinions of the Wall Street analysts
c. the "sub-prime" crisis
d. present value of the future cash flows per share
e. expected future dividends and the discount rate

16. Suppose a financial manager assumes there are no financial illusions.
What return would be earned immediately after a four-for-one stock split?
a. 100%

b. 50%
c. 25%
d. 0%
e. 400%

17. Generally Initial Public Offerings (IPOs) are a number of years :

a. Overpriced
b. Underperforming
c. Underpriced
d. Guaranteed by underwriters
e. Outperforming

18. Which of the following is <u>not</u> a defense mechanism against an unfriendly takeover:

a. Staggered Board
b. Poison pill
c. Golden parachute
d. Bear hug
e. Share certificates

19. Bedrijf PQR geeft 40 mln. nieuwe aandelen uit. Huidig aantal uitstaande aandelen (voor de SEO): 100 mln. tegen een koers van € 25. De emissiekoers is bepaald op € 20. De huidige aandeelhouders krijgen een right (2 per "oud" aandeel) om pro rata in de emissie te participeren. Voor 5 rights kunnen de bestaande aandeelhouders 1 nieuw aandeel in de emissie kopen. Ze kunnen de right zo gewenst ook verkopen tegen de marktkoers. De marktomstandigheden ten tijde van de SEO veranderen niet, i.e. rente, vooruitzichten etc. blijven gelijk, en de koers reageert alleen "efficiënt" op de SEO; geen verdere beursschommelingen die dag. De right zal een waarde krijgen van ongeveer:
a. 1,43
b. 1,50
c. 0,71
d. 1,56
e. 2,50

20. Welk verschijnsel is <u>geen</u> vorm van een "anomalie" (= uitzondering t.o.v. de EMH):
a. koersval in oct. 1987
b. weather effect
c. weekend effect
d. loss aversion
e. underperformance IPO stocks

21. Which of the following statement(s) is/are true if the efficient market hypothesis holds?

a. It implies perfect forecasting ability
b. It implies market is irrational
c. It implies prices follow a particular pattern
d. It implies prices reflect all available information
e. It implies that some anomalies do occur

22. Say you have two shares (1 and 2) with $E(r_1)$= 5% and σ_1 = 15%, $E(r_2)$ = 15% and σ_2 = 25%. Correlation coefficient $\rho_{1,2}$ is -0,3. What is the σ_p –standard deviation- for a portfolio with 80% share 1 and 20% share 2.
a. 12,7%
b. 11,5%
c. 13,1%
d. 13,9%
e. 14,8%

23. Bond with market value of 980.23, coupon interest = 6%, maturity = 3 years, nominal value = 1.000. What is market rate of return on this bond (= yield)?:
a. 5,5%
b. 6,5%
c. 5,0%
d. 7,0%
e. 6,75%

24. Convertible bond, convertible into 40 shares, nominal value = 1.000, coupon rate = 6,5%, market rate = 5,5%, maturity = 5 years, share price is 26,50. What is approximate bond value:
a. 1.060
b. 1.042
c. 960
d. 1.100
e. 928

25. Given a share with a dividend over 2007 of €1,75, expected growth = 5%, expected rate of return = 10%. What is the share price per 1/1/08 according to the Dividend Discount Model?:
a. 12,70
b. 14,58
c. 26,25

d. 35,00
e. 36,75

26. Which of the following investment projects has the lowest risk (and is therefore to be evaluated against a modest discount rate:
a. revenues increase with marketing campaign
b. training program for high potential staff
c. expansion of existing business in mature market
d. launch of new product in existing market
e. cost reduction with proven technology

27. Co. ABC acquires XYZ for € 600 mln. in cash. ABC borrows € 250 mln. in a bridge loan (temporary lending facility) and pays € 350 mln. from its own cash position. ABC has 100 mln. shares outstanding at a nominal value of € 10. Its stock trades at € 50 just before the acquisition. XYZ has a market value of € 400 mln. before the acquisition. After the acquisition the total market value of ABC, incl. XYZ, is (approximately), *ceteris paribus*:
a. 5.000
b. 5.250
c. 5.350
d. 5.600
e. 5.400

28. Say that the beta of company PietPuck can be determined by only 4 weekly data points (normally: 5 years of daily returns), as follows:

Stock return for PietPuck r(i)	Average market return r(m)
-1	0
1	1
2	1,5
3	2

What is the beta of the PietPuck company based only on these 4 data points:
a. 2.50
b. 1.25
c. 2.00
d. 1.00
e. 1.50

29. What is the alpha for the above PietPuck company over these 4 weeks:
a. -1
b. 0
c. 0.66
d. 1.50
e. -0.50

30. (The following is a true story, the numbers are approximate ....). The biggest Swiss bank UBS has written down (taken a loss of) $ 6 billion for its "sub-prime" portfolio. It was already known to investors that UBS had a major exposure in this area. Before this formal announcement the total value of the bank was $ 90 bn. and its shares were trading at around $ 50. Asian investment funds have now invested some $ 8 bn. in new equity in the bank. The following is the case (assume that no further changes take place, so no interest rate change, no changes in its top management):
a. UBS now has a market value of $ 92 bn., and its share price stays approximately even (ceteris paribus)
b. UBS now has a market value of $ 90 bn., and its share price went down (ceteris paribus)
c. UBS now has a market value of $ 98 bn., and its share price went up (ceteris paribus)
d. UBS now has a market value of $ 92 bn., and its share price went down (ceteris paribus)
e. UBS now has a market value of $ 98 bn., and its share price stays approximately even (ceteris paribus)

31. Company X acquires Company Y. Before the acquisition Y was valued at € 50 mln. and the value of X was € 100 mln. X pays for Y € 60 mln., 1/3 in cash and 2/3 by issuing new X shares to Y shareholders. After the acquisition the value of X combined with that of Y is, *ceteris paribus* (ignore synergy effect, if any):
a. 120
b. 100
c. 160
d. 150
e. 140

32. Which of the following statements is true if the Efficient Market Hypothesis holds:
a. it implies perfect forecasting ability
b. it implies that the market is irrational
c. it implies that prices follow a particular pattern
d. it implies the historic trend continues into the future
e. it implies that prices reflect all available information

33. The yearly return for a company is 10,3813%. This equates to a quarterly return of:
a. 2,560
b. 2,616
c. 2,500
d. 2,483
e. 2,467

44. If the beta of Freon is 1.15, risk-free rate is 4.5% and the market equity premium is 9.5%, calculate the expected rate of return from Freon:

A 23.45%
B 15.42%
C 14.28%
D 18.28%
E 10,25%

45. Operational leverage is determined by:

a. relationship of owners' equity to total capital
b. relationship of fixed to variable costs
c. debt equity ratio
d. gearing
e. solvency

46. A new grocery store cost $40 million in initial investment. It is estimated that the store will generate 4 million dollars after tax cash flow for five years. At the end of 5 years it can be sold for $42 million. What is the NPV of the project at a discount rate of 10%?

a. $ 2.42 million
b. $ 18 million
c. $ 1.21 million
d. $ 2.64 million
e. $ 1.24 million

47. A building is appraised at $1 million. This estimate is based on a forecast of net rent of $80,000 per year discounted at 8% [PV = 80,000/0.08= 1,000,000]. The rent is the net of repair and maintenance costs and taxes. Suppose the building is currently in disrepair and it takes one year and $400,000 to bring it into rentable condition. How much would you be willing to pay for the building today?

a. $ 925,926
b. $ 625,926
c. $ 600.000
d. $ 525.926
e. $ 500.000

48. The death of the CEO of a company and a sudden discount rate increase are examples of respectively:

a. Undiversifiable industry and general risk
b. Idiosyncratic and systematic risk
c. Diversifiable and idiosyncratic risk
d. Diversifiable and unsystematic risk
e. Specific and idiosyncratic risk

49. Company XYZ (value 10.000) acquires PQR (value 1.000 before acquisition) with a premium of 20%. The economic gain of the acquisition is determined at 400 by XYZ before the acquisition. XYZ issues for 1.200 in new shares and exchanges these for the PQR shares. The value of XYZ after the acquisition, *ceteris paribus*, becomes:
a. 11.200
b. 10.000
c. 11.400
d. 11.600
e. 11.000

50. The Capital Market Line (CML):
a. represents the expected return of an security given a certain risk profile
b. is the combination of all optimal risky security portfolios
c. is the combination all efficient and optimal portfolios
d. is the combination of portfolios consisting of risk free assets and the efficient market portfolio
e. is the efficient market portfolio