CHAPTER 39

ECONOMICS AND INVESTMENT MARKETS

1. (A) **Low price multiples.**

    Explanation

    Value stocks tend to have low price multiples, high dividend yield and tend to be in mature industries with low earnings growth.

    (Module 39.2, LOS 39.j)

    Related Material

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2. (B) **positively related to the term spread.**

    Explanation

    Term spread (i.e., difference in yield between long dated government bonds and short-dated government bonds) is normally positive. Given that longer-term government bonds have a higher risk premium for uncertainty in inflation; term spread would be higher resulting in a positive relationship.

    (Module 39.1, LOS 39.d)

    Related Material

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3. (C) **Rise during recessions.**

    Explanation

    Credit losses (probability of default and loss given default) tend to be higher during recessions and hence credit spreads are higher during recessions.

    (Module 39.1, LOS 39.f)

    Related Material

    SchweserNotes - Book 5

4. (A) **Uncertainty about their future income decreases.**

    Explanation

    Investors would increase their savings rate when uncertainty about future income increases and/or expected rates of return increase.

    (Module 39.1, LOS 39.c)

    Related Material

    SchweserNotes - Book 5

5. (C) **High real rate, low inter-temporal rate of substitution and a high rate of current borrowing by investors.**

   Explanation

   High GDP growth leads to higher future expected incomes and therefore high rate of current consumption (low savings, high borrowings, and an increase in the real default-free rate of interest) and a low inter-temporal rate of substitution.

   (Module 39.1, LOS 39.c)

   Related Material

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6. (B) **Risk-free bonds.**

   Explanation

   Risk-free bonds (especially long maturity bonds) provide an effective hedge against bad consumption outcomes. Equity prices and real estate values tend to be positively related to the state of the economy and hence do not provide good hedges against bad consumption outcomes.

   (Module 39.2, LOS 39.h)

   Related Material

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7. (B) **Equity risk premium increases.**

   Explanation

   Price multiples are positively related to earnings growth and negatively related to each of the components of the discount rate (i.e., real rate, inflation premium, equity risk premium).

   (Module 39.2, LOS 39.j)

   Related Material

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8. (C) **2.25%**

   Explanation

   The YTM on the corporate bond is (102/96.91) − 1 = 5.25%.

   Credit spread = Yield − BEI − R = 5.25% − 2% − 1% = 2.25%

   (Module 39.1, LOS 39.f)

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Most economic observers in the Republic of Nearland agree that the country will suffer a recession in the near future. At an economics conference at Nearland's premier university, four professors were having a lively discussion about how economic theory, the business cycle, and investment performance interact.

Professor Adams made two statements about the utility of consumption being an important driver of interest rates:

Statement 1:	"If we believe that a recession is likely in the future, we would expect the marginal utility of consumption in the future to be lower relative to the utility of current consumption, and the inter-temporal rate of substitution to be higher than they would otherwise be if there was optimism about future economic conditions."
Statement 2:	"It is my estimate that consumption in one year's time has 5% less utility than consumption in the present."

Professor Brady poured scorn on Professor Adams' second statement. He replied that predicting such precise values for abstract economic concepts such as utility was impossible. Trying to value bonds and interest rates, he argued, was much more likely to be accurate if calculations were based on more measurable macroeconomic fundamentals, such as GDP growth and inflation. Central bank policy rates, he stated, are positively correlated to current inflation and current GDP growth.

Professor Chapman attempted to mediate between Adams and Brady. He said, "In a way, you both have a point. At the top of the business cycle there is higher inflation and current GDP growth. At the same time, market participants begin to worry about future recession, which increases the marginal utility of delayed consumption. These conditions both explain a steepening of the upward-sloping yield curve."

Professor Douglas tried to move the conversation towards the business cycle and risk premiums. She presented the audience with economic data as presented in Exhibit 1, and challenged observers to calculate the equity risk premium in Nearland.

Exhibit 1: Economic Data for Nearland

Break-even rate of inflation	2.80%
Credit spread	3.10%
Risk premium for equities relative to debt	4.50%

Professor Douglas went on to discuss asset classes, which could act as a consumption hedge to guard against the upcoming recession. She invited the audience to attend her upcoming discussion seminar where she would analyze the prospects for real estate, growth stocks, and value stocks.

9. **(B)** incorrect in respect of the marginal utility of consumption.

Explanation

If recession is likely, individuals become concerned that their standard of living will fall in the future, making saving more attractive. U_t, the marginal utility of delayed consumption, will be higher than normal. The inter-temporal rate of substitution, U_t / U_0, will likewise be higher than normal.

(Module 39.1, LOS 39.c)

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10. **(C)** 5.26%.

Explanation

If the utility of delayed consumption is 5% less that consumption at present, setting the utility of present consumption as 1 implies the utility of delayed consumption is 0.95.

intertemporal rate of substitution = $m_t = \dfrac{\text{marginal utility of dealyed consumption}}{\text{marginal utility of present consumption}}$

$= \dfrac{0.95}{1}$

$= 0.95$

The risk-free rate of return can then be calculated:

$R = \dfrac{1}{E(m_t)} - 1 = \dfrac{1}{0.95} - 1$

$= 5.26\%$

(Module 39.1, LOS 39.c)

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11. **(A)** correct.

Explanation

The Taylor rule links central bank interest rates to inflation and GDP growth:

$r = R_n + \pi + 0.5(\pi - \pi^*) + 0.5(y - y^*)$

where:

r = central bank policy rate implied by the Taylor rule

R_n = neutral real policy interest rate

π = current inflation rate

π^* = central bank's target inflation rate

y = log of current level of GDP

y*   = log of central bank's target (sustainable) GDP

If inflation and GDP rise, central bank policy rates would be expected to rise if the Taylor rule holds.

(Module 39.1, LOS 39.d)

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12. (C) **incorrect as the circumstances described would flatten an upward-sloping yield curve.**

Explanation

At the top of the business cycle current inflation and GDP growth are high, which increases short-term rates. Fears about future recession, however, increase marginal utility of delayed consumption, which decreases longer-term interest rates as investors become more keen to save, increasing demand for bonds and decreasing yields. These circumstances would cause a flattening of an upward-sloping yield curve, and could even result in an inverted (downward-sloping) yield curve.

(Module 39.1, LOS 39.d)

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13. (B) **7.60%.**

Explanation

The equity risk premium is the return demanded by equity investors in excess of the nominal return on a risk-free bond. It comprises a credit risk premium (credit spread) representing the risk of default on a risky bond, as well as an additional risk premium relative to risky bonds for an investment in equities.

The break-even inflation rate comprises expected inflation as well as a risk premium for uncertainty about inflation. It is included in both the overall expected return on equity and the nominal risk-free rate, so does not affect the equity risk premium.

(Module 39.2, LOS 39.h)

Related Material

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14. (C) **value stocks.**

Explanation

An asset suitable as a consumption hedge is one which performs relatively better in recessionary conditions than other asset classes. Equities in general are cyclical,

and would be expected to perform poorly in weak economic conditions. Real estate can be considered to have both bond-like properties in that there is a predictable stream of cash flows, and equity-like properties in the uncertainty of the future value of the property. The equity-like element of real estate investments makes them unsuitable as a consumption hedge.

Growth stocks (high P/E, low dividend yields) tend to be in immature markets with high growth prospects. Value stocks (low P/E, high dividend yields, stable earnings) are commonly in established markets. A value strategy tends to perform well in recessionary conditions, while a growth strategy is more suitable for economic expansions.

(Module 39.2, LOS 39.k)

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15. (C) Be uncertain.

Explanation

BEI = expected inflation + risk premium for uncertainty about inflation. While inflation is expected to decrease, the higher inflation uncertainty increases the risk premium. Hence the overall impact is uncertain.

(Module 39.1, LOS 39.e)

Related Material

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16. (B) New information reveals that the market's expectations about earnings were inaccurate.

Explanation

Market values change when new information differs from expectations that are currently priced in.

(Module 39.1, LOS 39.b)

Related Material

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17. (A) Differences in ratings.

Explanation

Differences in credit spreads across sectors is related to differences in products/services the sector produces and leverage typically used in the sector.

(Module 39.2, LOS 39.g)

Related Material

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18. **(A)** **During economic contractions.**

Explanation

Diminishing marginal utility of wealth means that an investor's marginal utility of consumption declines as wealth increases. This suggests that marginal utility of consumption is higher during periods of scarcity, such as during economic contractions.

(Module 39.2, LOS 39.c)

Related Material

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19. **(B)** **Consumer durable**

Explanation

Earnings of companies in cyclical industries such as consumer durable or consumer discretionary would be more sensitive to business cycle as opposed to companies in non-cyclical industries such as consumer non-discretionary.

(Module 39.2, LOS 39.i)

Related Material

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20. **(A)** **Upward sloping**

Explanation

During recessions, policy rates tend to be low. Over a longer period, investor's expect inflation to be higher as the economy comes out of recession and hence longer-term rates tend to be higher resulting in an upward sloping yield curve.

(Module 39.1, LOS 39.d)

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21. **(C)** **Risk free interest rates, risk premiums, timing and/or magnitude of expected cash flows change.**

Explanation

Market values of assets are affected when the expected cash flows or discount rate changes. The discount rate can change either due to changes in risk-free rate or due to changes in risk premiums.

(Module 39.1, LOS 39.a)

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22. (B) Increase during economic downturns.

Explanation

Spreads on issues from the consumer cyclical sectors tend to rise during economic downturns and fall during expansions reflecting cyclicality in earnings of the companies in the sector.

(Module 39.2, LOS 39.g)

Related Material

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23. (B) lack of liquidity.

Explanation

The additional risk-premium for real estate is due to lack of liquidity.

(Module 39.2, LOS 39.k)

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24. (C) Risky bonds will outperform risk-free bonds.

Explanation

When credit spreads narrow, lower rated bonds outperform higher rated bonds.

(Module 39.1, LOS 39.f)

Related Material

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25. (C) The difference in yields of non-inflation indexed and inflation indexed risk-free bonds.

Explanation

Break-even inflation is the difference in nominal and real risk-free rates lt comprises premium for inflation and the risk premium for uncertainty in inflation.

(Module 39.1, LOS 39.e)

Related Material

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26. (C) The bond's return is 5.26% or more.

Explanation

Real risk-free rate = (1/E (inter-temporal rate of substitution) − 1

= (1/0.95)) −1 = 0.0526 or 5.26%

(Module 39.1, LOS 39.c)

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27. (A) Lower the utility investors attach to future consumption relative to current consumption.

Explanation

Real rate of return is higher, higher the utility of current consumption relative to future consumption. If investors expect lower incomes in the future, the utility of future consumption relative to current consumption will be higher and real rate will be lower.

(Module 39.1, LOS 39.c)

Related Material

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28. (C) expectations of higher income in the future.

Explanation

An increase in real GDP growth means that more goods and services will be available in the future relative to today. Investors will be less willing to substitute across time, leading to more borrowing and less saving. This leads to an increase in the real default-free interest rate.

(Module 39.1, LOS 39.c)

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29. (A) Due to its desirable consumption hedging ability, an investment in ABC stock would command a lower equity risk premium.

Explanation

Assets that pay off during times of scarcity provide desirable consumption hedging property. Investors will demand a lower equity risk premium on such assets.

(Module 39.2, LOS 39.h)

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30. (A) A decline in expected inflation.

Explanation

Equity market prices are positively related to expected earnings/cash flows and negatively related to discount rate. Discount rate is positively related to inflation expectations and treasury yields (risk-free rate).

(Module 39.1, LOS 39.a)

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31. (C) The expected value of the investors' inter-temporal rate of substitution between current period and one period from now.

Explanation

The price of a The price of a zero-coupon, inflation indexed, risk-free bond that pays $1 in one period is the expected value of the investors' inter-temporal rate of substitution between current period and one period from now. This value is less than $1 as the utility of current consumption is greater than consumption in one period in the future.

(Module 39.1, LOS 39.c)

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