**Mid Term Exam**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Part I (Multiple Choices 1.5 points each total 45 points)**

1. The default free bonds are:

A) junk bonds B) investment grade bonds C) U.S. Treasury bonds D) municipal bonds

2. The term structure of interest rates is defined as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The yield curve is defined as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. Yield curves are typically

A) upward sloping. B) bowl shaped. C) flat. D) mount shaped.

5. When yield curves are steeply upward sloping,

A) long term interest rates > short term interest rates.

B) short term interest rates > long term interest rates.

C) short term interest rates = long term interest rates.

D) medium term interest rates > short term and medium term interest rates > long term interest rates.

6. When yield curves are downward sloping,

A) long term interest rates > short term interest rates.

B) short term interest rates > long term interest rates.

C) short term interest rates = long term interest rates.

D) medium term interest rates > short term and medium term interest rates > long term interest rates.

7. When yield curves are flat,

A) long term interest rates > short term interest rates.

B) short term interest rates > long term interest rates.

C) short term interest rates = long term interest rates.

D) medium term interest rates > short term and medium term interest rates > long term interest rates.

8. An inverted yield curve

A) is flat B) slopes up. C) slopes down. D) U shape.

9. Which of the following is an entity of the Federal Reserve System?

A) The U.S. Treasury Secretary

B) The FOMC

C) The Comptroller of the Currency

D) The FDIC

10. One of the Federal Reserve Banks houses the open market desk in the Federal Reserve System. It is located in \_\_\_\_\_\_\_\_\_\_\_\_

A) Boston B) New York C) Chicago D) San Francisco

11. One of the Federal Reserve Banks always has a vote in the Federal Open Market Committee (FOMC). It is located in \_\_\_\_\_\_\_\_\_\_\_\_

A) Philadelphia B) Boston C) San Francisco D) New York

12. Which of the banks of the following are required to be members of the Fed.

A) banks with assets less than $600 million

B) nationally chartered banks

C) banks with assets less than $200 million

D) state chartered banks

13. Which of the following is the he monetary liabilities of the Federal Reserve

A) the government securities as well as the discount loans.

B) the currency in circulation as well as the reserves.

C) the government securities as well as the reserves.

D) the currency in circulation as well as the discount loans.

14. Total reserves = sum of \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_.

A) required reserves as well as currency in circulation

B) excess reserves as well as borrowed reserves.

C) vault cash as well as excess reserves

D) excess reserves as well as required reserves

15 Fed purchases $100 of bonds from Bank First. Thus, reserves in the banking system

A) increase by $100.

B) decrease by $100.

16. Fed sells $100 of bonds from Bank First. Thus, reserves in the banking system

A) increase by $100.

B) decrease by $100.

17. Assume that the required reserve ratio is 20%. When the Fed increases reserves by $100, how much can the checkable deposits expand?

A) $100. B) $200. C) $500. D) $1,000.

18. Assume that the reserves in the banking system increase by $100. Also, the checkable deposits increase by $400. How much is the required reserve ratio?

A) 0.01. B) 0.10. C) 0.20. D) 0.25.

19. Which of the following is the primary indicator of the Fed’s stance on monetary policy?

A) the discount rate. B) the federal funds rate. C) the growth rate of M2. D) the growth rate of M1.

20. The interest rate that is charged on the overnight loans of reserves between banks is which of the following:

A) discount rate. B) federal funds rate. C) Treasury bill rate. D) Treasury bond rate

21. Pick the correct answer. For a company to choose to call its outstanding callable bond, which of the following events would make it more likely to happen?

a. A drop in market interest rates.

b. bonds are downgraded.

c. An increase in the call premium.

22. A bond matures in 12 years, annual coupon 8 percent. Face value of $1,000, and currently sells for $985. Calculate current yield and yield to maturity.

a. Current yield = 8.12%; YTM = 8.37%.

b. Current yield = 8.12%; YTM = 8.20%.

c. Current yield = 8.20%; YTM = 8.37%.

d. Current yield = 8.00%; YTM = 7.92%.

23. A bond matures in 14 years. 8 percent semiannual coupon, face value of $1,000. The bond is callable in five years. The call price = $1,050. The price of the bond today= $1,075. Calculate yield to maturity (YTM) and yield to call (YTC)?

a. YTM = 14.29%; YTC = 14.09%

b. YTM = 7.14%; YTC = 7.34%

c. YTM = 6.64%; YTC = 4.78%

d. YTM = 7.14%; YTC = 7.05%

24. A bond with an 11 percent semiannual coupon has a YTM of 9%. The bond matures in 20 years but is callable in 10 years. The face value is $1,000 and the call price is $1,055. Calcualte yield to call?

a. 8.43%

b. 8.50%

c. 8.58%

d. 8.65%

25. Assume that you plan to buy AAA stock today and you plan to hold the stock for 2 years only. You expect to receive no dividend at the end of Year 1, but receive a dividend of $9.25 at the end of Year 2. At the end of year 2 you also expect to sell the stock for $150. Expected rate of return= 16 percent. Calculate the stock price.

a. $160.14

b. $ 75.23

c. $105.37

d. $118.35

26. AAA will pay a year end dividend of $3.00 a share (D1 = $3.00). The stock currently = $30 a share. The required (and expected) rate of return = 16 percent. What is g? (Dividend is expected to grow at a constant rate, g.

a. 12.00%

b. 11.05%

c. 6.00%

d. 7.00%

27. Stock price = $20 a share. The stock’s year end dividend = $2 a share (D1 = $2.00). The stock’s required rate of return = 15% and the stock’s dividend is expected to grow at the same constant rate forever. Calculate the stock price 7 years from now?

a. $28

b. $519

c. $37

d. $21

28. Do= $1.00. AAA's growth rate will be 5 percent for 2 years. After that, dividends will grow at 10 percent forever. Required rate of return on equity (rs) = 12 percent. Calculate the current stock price.

a. $21.00

b. $34.31

c. $41.95

d. $50.16

29. AAA just paid an annual dividend of $1.42 a share. AAA will pay $1.50, $1.75, and $1.80 a share over the next 3 years, respectively. After that, the dividend will be $2 per share per year forever. Required rate of return on equity (rs) = 10.5 percent. Calculate the current stock price.

A. $15.09  
B. $16.01  
C. $18.24  
D. $21.61

30. AAA pays no dividend now. AAA plans to start paying an annual dividend of $0.40 per share for 2 years commencing 4 years from today. After that, AAA will pay $0.75 per share annual dividend indefinitely. Required rate of return on equity (rs) = 11.6%. Calculate the current stock price.   
A. $3.75  
B. $4.22  
C. $4.31  
D. $3.51

**Part II Short Answer Questions (total 55 points. Total 9 questions)**

1. What is the difference between monetary policy and fiscal policy? (5 points)
2. Explain what are Fed fund rate and discount rate. Which rate is targeted by Fed to implement Monetary Policy? (5 points)
3. What are the three tools of Monetary Policy? (5 points)
4. Fed is known as the banker’s bank. Explain what does it mean in detail (hint: Fed is the last resort for banks. (5 points)
5. Why does Fed pay interest on reserve? Why do banks keep excessive reserve with Fed? (7 points)

1. “The biggest banks in the U.S. are making far fewer loans to small businesses than they did a decade ago”. What is opinion on the above assertion? (9 points)

Big Banks Cut Back on Loans to Small Business

Small businesses get fewer loans from banks, turning to alternative lenders that charge significantly higher rates

By RUTH SIMON

Nov. 26, 2015 8:10 p.m. ET

The biggest banks in the U.S. are making far fewer loans to small businesses than they did a decade ago, ceding market share to alternative lenders that charge significantly higher rates.

Together, 10 of the largest banks issuing small loans to business lent $44.7 billion in 2014, down 38% from a peak of $72.5 billion in 2006, according to an analysis of the banks’ federal regulatory filings.

Through August, banks this year originated 43% of business loans of up to $1 million, down from 58% for all of 2009, according to PayNet Inc., a tracker of small business credit.

The change has [opened the door to higher-cost alternatives](http://www.wsj.com/articles/former-sba-chief-weighs-in-on-the-rapidly-changing-world-of-financing-1448248051): Nonbank lenders increased their market share to 26% from 10%, with corporations that lend to their business customers or suppliers making up the balance.

“At least 60% of our borrowers would fall into classic bank lending criteria,” said Rob Frohwein, chief executive of online lender Kabbage Inc., which charges rates that average about 39%, versus the typical 5% to 6% or so that banks charge small firms with good credit.

At some big banks, the credit card has become the default loan source for small businesses. Rates on cards issued to small businesses average 12.85%, according to Creditcards.com.

Small business spending on credit and charge cards will total an estimated $445 billion this year, up from about $230 billion in 2006, according to First Annapolis Consulting Inc., a payments consulting firm.

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At [J.P. Morgan](http://quotes.wsj.com/JPM), the Ink small-business credit card accounts for more than 90% of loans to businesses with $1 million or less in revenue. One reason is that it costs the bank about the same to originate a $100,000 small business loan as it does for one of $1 million, the company said. Credit cards cost a lot less to issue.

“You have to figure out a way to make a $100,000 loan make economic sense,” said a J.P. Morgan spokeswoman, adding that a new, centralized loan operation is supposed to cut the cost and time of originating smaller loans.

The dollar amount of small loans to businesses held by banks increased by an average of 7.3% a year from 1998 to 2008, said DePaul University finance professor Rebel A. Cole,providing fuel for economic growth. Firms with fewer than 500 employees account for more than half of [private sector jobs](http://blogs.wsj.com/economics/2015/11/19/why-it-matters-that-new-businesses-are-creating-jobs-more-slowly-than-a-decade-ago/) in the U.S. according to the Bureau of Labor Statistics.

Banks of all sizes held $598 billion in small loans to businesses as of Sept. 30, according to the Federal Deposit Insurance Corp., down nearly 16% from a peak of $711 billion in 2008. By contrast, loans to larger companies increased 37% during that time.

The largest banks “have essentially abandoned the small business market,” said Mr. Cole, who analyzed bank regulatory filings for The Wall Street Journal. The analysis looked at loans of up to $1 million, adjusting for bank mergers and acquisitions.

Weak demand, tighter lending standards and high costs have put a lid on small business borrowing in the past seven years, even as other types of financing—home mortgages, auto loans and corporate finance—have rebounded from the financial crisis.

Many big companies are locking in low-cost, long-term financing or [borrowing to fund mergers](http://blogs.wsj.com/moneybeat/2015/08/04/ma-borrowing-hits-a-fresh-record-amid-deal-splurge/), said John Elmore, vice chairman of consumer and small business banking at[U.S. Bancorp](http://quotes.wsj.com/USB). Small-business owners, by contrast, “are just more cautious or don’t have the [degree of confidence](http://www.wsj.com/articles/small-business-owners-confidence-in-economy-wanes-1440621823) to go full in,” he said, despite good financial performance.

A prolonged decline in new business formation has reduced the borrowing pool. Plus, banks have been slower to ease lending standards for small firms than for big ones after the recession.

Many banks, in fact, are less interested in small business lending because it isn’t as profitable as loans that more easily fit into standardized approval and repayment processes—such as credit cards and mortgages—and can be packaged into securities for sale to investors, according to Federal Reserve Bank of Cleveland senior policy analystAnn Marie Wiersch.

Small business loans are often as nearly as complicated for banks to complete as large loans, with less return. “We all struggle to make money on the lending side,” said Jay DesMarteau, head of small business banking at TD Bank. “It’s a lot of work to try and find these little companies, underwrite them and manage the book, when the units are high and the dollars low.”

Jorge Rodriguez, owner of a Peruvian restaurant in Los Angeles, said [Wells Fargo](http://quotes.wsj.com/WFC) & Co.—his bank for several years—turned him down three years ago when he sought financing to remodel and expand his business.

“They wouldn’t even look at me as a viable client,” said Mr. Rodriguez, who secured a $311,000 Small Business Administration loan from [BBCN Bancorp](http://quotes.wsj.com/BBCN) Inc., a local community bank, with a recent rate of 5.5%.

Wells Fargo rejected Mr. Rodriguez again in 2014, he said, this time for a $25,000 loan to buy liquor and other supplies. He turned to two online lenders, with rates above 80%. He has since refinanced those high-cost loans and secured additional funding to expand from Opportunity Fund, a nonprofit lender, that had an annual rate of 12.3%, the lender said.

A Wells Fargo spokesman said the bank follows a consistent process for evaluating loan requests but doesn’t comment on specific borrowers. The bank issues more small business loans than any other U.S. lender, he said.

Ric Breines, president of 2½-year-old ACDC Solar, a Lebanon, N.J., company that provides sales, marketing and project development for solar panel installers, said bank financing would help him expand beyond four employees. “But without five years of experience, without financial statements to back it up,” he said, “I think it’s unrealistic.”

Banks want to see a proven track record, Mr. Breines said: “It’s not like the olden days where I could borrow $100,000 on a handshake…based on what the banker knew about me personally, my business and prior experience.”

Lending by banks is concentrated among firms that are at least 10 years old, according to a PayNet analysis. “It’s the early stage companies that are getting hit hardest by the credit gap,” PayNet President William Phelan said.

All 10 banks in the analysis conducted for the Journal said they remained committed to small business lending. Some said the government data doesn’t capture small-business loans above $1 million, the reporting threshold.

Two of the banks, Wells Fargo and [Capital One Financial](http://quotes.wsj.com/COF) Corp., said they partner with nonprofit lenders that provide credit to small firms that may not qualify for conventional loans. Wells Fargo said it extended roughly $50.9 million in loans, investments and grants to nonprofits that support small business economic development in 2014.

[Bank of America](http://quotes.wsj.com/BAC) Corp. began offering lines of credit of $10,000 to $100,000 this summer using a less expensive underwriting process that includes a review of checking and merchant payment processing accounts, instead of checking years of tax returns and financial statements.

Before the new program, “if you wanted $10,000, $15,000 or $20,000 in credit, the option we would give you would be a credit card,” said Bank of America Small Business ExecutiveRobb Hilson. “If someone wants to buy a forklift, it doesn’t make sense to put it on a credit card.”

1. Fed will increase interest rate soon. What is your opinion on this round of interest rate adjustment? (9 points)

# Yellen Signals Fed on Track to Raise Rates in December

## Fed chief says gains in labor market bolster her confidence that inflation will return to 2%

By JON HILSENRATH And DAVID HARRISON

Updated Dec. 2, 2015 5:18 p.m. ET

Federal Reserve Chairwoman  [JanetYellen](http://topics.wsj.com/person/Y/Janet-Yellen/5513) signaled she’s ready to raise short-term interest rates this month barring a surprise that shakes her confidence in the economy.

She also suggested she sees dissension within her ranks, which could complicate her moves toward ending seven years of near-zero rates.

“I don’t need unanimity. I think we have to tolerate some dissent,” Ms. Yellensaid Wednesday, in answer to a question after delivering a speech on the economic outlook. “I wouldn’t try to stifle dissents, and I would even expect some at critical junctures.”

In addition to some regional Fed bank presidents, two Washington-based Fed governors have expressed hesitance about raising rates, though the consensus appears to be moving against them.

“Absent information that drastically changes the economic picture and outlook, I feel the case for liftoff is compelling,” [Atlanta Fed President Dennis Lockhart said in a speech in Fort Lauderdale, Fla., on Wednesday](http://www.wsj.com/articles/feds-lockhart-case-for-december-rate-rise-is-compelling-1449061943).

The Fed, which holds its next policy meeting Dec. 15-16, has said it would raise its benchmark federal-funds rate from near zero after it saw further improvement in the job market and became reasonably confident inflation will rise toward its 2% target.

Ms. Yellen on Wednesday described an economic backdrop fitting that description, a strong hint she is leaning toward lifting rates soon. She also warned that delaying a rate increase could hurt the economy, for instance by inducing risk-taking among investors that could destabilize the financial system.

“On balance, economic and financial information received since our October meeting has been consistent with our expectations of continued improvement in the labor market,” Ms. Yellen said in her speech. “Continuing improvement in the labor market helps strengthen confidence that inflation will move back to our 2% objective over the medium term.”

The latest economic data underscore Ms.Yellen’s optimism.

On Wednesday, [the Labor Department reported](http://www.wsj.com/articles/u-s-productivity-rises-2-2-in-third-quarter-1449063206) inflation-adjusted hourly compensation for workers in the nonfarm business sector rose 3.4% in the third quarter compared with the same quarter a year ago, the second-largest jump since the third quarter of 2009. That comes after hourly compensation grew 3.3% in the second quarter over the same quarter of 2014.

Other wage measures have also shown improvement. Average hourly earnings of private-sector employees were 2.5% higher in October than a year before, the largest annual increase since July 2009, according to a separate Labor Department report.

“What the rest of the industry is seeing, what we are seeing as well, is just general wage-rate pressure,” Doug Benn, chief financial officer at the [Cheesecake Factory](http://quotes.wsj.com/CAKE) Inc. chain of restaurants, told analysts in a conference call last month. “Being able to be fully staffed in an environment where there is an alternative—many alternatives for workers to go other places—it’s been a challenge.”

Still, inflation, by the Fed’s preferred measure, [has run below its target for 42 consecutive months](http://www.wsj.com/articles/u-s-inflation-undershoots-feds-2-target-for-42nd-straight-month-1448460597).

The Labor Department on Friday will deliver a report on November job growth and unemployment, a key final piece of data Fed officials will look at before making their rate decision. At this point, it would likely take a big disappointment in the report to give them pause.

[Futures markets put a 75% probability](http://www.wsj.com/articles/rate-rise-bets-heat-up-after-fed-minutes-1447890850) on a quarter-percentage-point rate increase at the Fed’s meeting this month, according to the Chicago Mercantile Exchange.

Ms. Yellen’s comments, including a warning about the dangers of waiting too long to raise rates, did little to diminish those expectations.

“Were the [Fed] to delay the start of policy normalization for too long, we would likely end up having to tighten policy relatively abruptly to keep the economy from significantly overshooting both of our goals,” she said. “Such an abrupt tightening would risk disrupting financial markets and perhaps even inadvertently push the economy into recession. Moreover, holding the federal funds rate at its current level for too long could also encourage excessive risk-taking and thus undermine financial stability.”

[Stocks fell after her comments](http://www.wsj.com/articles/global-stocks-little-changed-ahead-of-ecb-meeting-u-s-jobs-report-1449047610). The Dow Jones Industrial Average closed down 158.67 points, or 0.9%, at 17729.68.

The Fed lowered short-term rates to near zero in December 2008 during the financial crisis, and has held them there since to support the economy through the recession and fitful recovery.

Having [convinced much of the investing public](http://www.wsj.com/articles/some-hedge-funds-make-millions-from-bets-on-expected-rise-in-u-s-rates-1448356239) that a rate increase is coming this month, Fed officials are now trying to hammer a message that they will move gradually and cautiously after that first move.

Ms. Yellen pointed to the low level of the “neutral” fed-funds rate. This is a theoretical rate that would be compatible in normal times with consistent low U.S. unemployment and steady inflation.

Before the financial crisis, this neutral rate was widely estimated to be near 4%. Adjusted for inflation that would be close to 2%.

Since the crisis, Ms. Yellen noted, the neutral rate adjusted for inflation has been below zero. In other words, the economy hasn’t been able to bear the higher rates seen in normal times because it’s been too fragile.

Ms. Yellen said she expects the neutral rate to move up slowly as the economy strengthens, but she isn’t sure if it will rise or how much. This means the Fed will move gradually and tentatively as it proceeds, to find the economy’s new balance point.

On this front, Ms. Yellen appears to have common ground with potential dissenters. Fed governor Lael Brainard, who has expressed reservations about raising rates, [dedicated a speech Tuesday to the low level of the neutral fed funds rate](http://www.wsj.com/articles/monetary-policy-path-likely-to-be-cautious-and-gradual-brainard-says-1449018001?tesla=y).

“The new normal is likely to be characterized by a lower level of interest rates than in the decades preceding the crisis, which counsels a cautious and gradual approach to adjusting monetary policy,” Ms. Brainard said.

8. Explain what types of roles the Federal Reserve Bank of New York plays within the Federal Reserve System? (5 points)

9. List the voting members of the Federal Open Market Committee. Explain why this committee is so important. Also, where does the power lie within the Federal Open Market Committee? (5 points)