

Overview

A. What is the Fed Challenge?

B. Goals

THE FED CHALLENGE ...

“ ... so engaging I’ve organized an extracurricular, voluntary economics club around it.”

FRANK PEDONE, ASSISTANT PRINCIPAL OF SOCIAL STUDIES,
ABRAHAM LINCOLN HIGH SCHOOL, BROOKLYN, NEW YORK

“I really wasn’t sure I wanted to do it for one reason: Did I know enough economics to achieve the level of sophistication that the kids should have to make a presentation. [But] I discovered, as they discovered, we all know more than we think we know.”

LIZ PLOEGER, TEACHER, MANHASSET HIGH SCHOOL, NEW YORK

“Once you get a program like this and you study it and then you bring it to your students, they take off with it. It’s not like you’re micromanaging everything.”

JOE LANZA, TEACHER, RUMSON-FAIR HAVEN HIGH SCHOOL,
RUMSON, NEW JERSEY

These educators are all talking about the same thing—the annual economics education program for high school students known as the Fed Challenge—and they’re talking about it with a degree of authority and familiarity we’d like to impart to you. That, in fact, is the purpose of this teacher’s guide: to level the playing field for first-time participants and returning veterans alike by providing everyone with everything that’s needed, short of students, to prepare and to lead a Fed Challenge team.



A. What is the Fed Challenge?

Ideally, it's an unforgettable yet manageable activity in decision-making, economic analysis, public speaking, and teamwork. Technically, it's a 25-minute performance-based assessment conducted for students at Federal Reserve Banks and Branches in participating Federal Reserve Districts. Each performance consists of two parts: a 15-minute presentation on the economy—modeled after the kinds of presentations engaged in by Federal Reserve decision-makers—and a 10-minute question-and-answer session.

The activity, depending on the District, can be:

- competitive—a tournament in which only the winners advance to the next round of presentations. In such competitions, feedback is provided by a panel of judges in accordance with a universally applied scoring rubric; or
- non-competitive—with feedback provided by qualified Federal Reserve staff or educators whose comments seek to praise, clarify, and motivate.

In the competitive tournament, the winners of the District playoffs, as judged by actual Federal Reserve officials, are sent on a three-day, expense-paid trip to Washington, D.C. There, in the Federal Reserve Boardroom where the Federal Open Market Committee (FOMC) convenes, a final run-off of District champions takes place before actual Committee members acting as judges. While the ultimate winner receives the FOMC Cup, all Fed Challenge participants are eligible for a variety of prizes. Teachers are given awards as well.

However, whether they're put to competitive or non-competitive ends, the skills nurtured by the Fed Challenge—from thinking on one's feet to making presentations about the economy—are skills for life. Participants who benefit from this experience are high school students, five to a team, selected by any number of means to represent their respective schools. And while the precise format is at the discretion of the team, each presentation at each level is obliged to:

- cover current economic conditions (as of the day of the presentation);
- forecast near-term changes in economic, financial, and international conditions of critical import to monetary policy (e.g., unemployment, inflation, and output);
- identify pressing economic, financial, and international issues that warrant immediate attention in the formulation of monetary policy; and
- recommend an increase, decrease, or no change in short-term interest rates.

In competitive rounds, the question-and-answer session following each Fed Challenge presentation is an exchange between the team of presenters and the panel of judges charged with evaluating the team's performance. The judges are drawn from a field of educators, economists, business executives, and Fed officials. Between two and five judges sit on each panel, depending on the District and the round of competition.

Although free to ask about any relevant topic, judges generally base their questions on:

- points made during the student presentation—*“Explain your argument that the Fed does not consider the CPI an accurate measure of inflation.”*
- macroeconomic theory—*“Is there really a trade-off between inflation and unemployment?”*
- what-if hypotheses—*“What if the next report by the Department of Labor indicated an unemployment rate of 4.5%? What would that mean for short-term interest rates?”*
- experiences relevant to the presentation—*“In preparing for the Fed Challenge, what is the most important key to success?”*

B. Why do the participating Federal Reserve Banks sponsor the Fed Challenge?

The Fed Challenge was introduced in 1995 to encourage students to learn about the role of the Federal Reserve System in the U.S. economy. Although that is a worthwhile objective in its own right, the competition has other benefits as well.



For students, the competition often stirs interest in economics, business, and finance as subjects for undergraduate and post-graduate study, potentially serving as a springboard to a productive and rewarding career. The Fed Challenge also affords students an opportunity to develop research,

cooperation, presentation, and critical-thinking skills, thereby providing a store of experience for use in any number of endeavors.

For the Fed, commitment to economic literacy is a proud tradition. Any opportunity to extend this tradition, while working closely with educators, is welcome. This is especially the case for an opportunity that fosters active student participation, which research acknowledges to be the best sort of learning experience. Out of respect for this research, as well as for the potency of cooperative learning, the participating Federal Reserve Banks are pleased to present themselves as partners for high school classes and extra-curricular groups committed to learning not only about government and social studies but also about economics and business.

Presentations

- A. Selecting a team
- B. Involving all class members
- C. Developing the presentation

A. Selecting a team

A Fed Challenge team can be put together in any number of ways, including:

- **Intra-Class Competitions:** A single economics class can provide enough of a selection pool to recruit a Fed Challenge team. One way to proceed is to divide the class into equal-sized teams and have each one make a Fed Challenge presentation before the rest of the class. The team that makes the best presentation can then go on to represent the school. Or, should an “all-star” team approach be taken, the five best presenters in the entire class (regardless of which team they were originally on) can be brought together to form a team of their own.
- **Inter-Class Competitions:** This approach merely extends the intra-class competition to other classes, producing either a best-of-school team or a team of the school’s best presenters.
- **Extracurricular Activity:** This is desirable when one or more student groups volunteer to work on the Fed Challenge as an out-of-class activity. (The approach is a natural should the school already have an Economics or Business Club.) An advantage of extracurricular recruiting is its accommodation of returning participants, who can relate, first-hand, their experiences from the previous year’s Fed Challenge.
- **Teacher Selection:** A teacher assembles a team on the basis of overall performance, some in-class assignment, or expressed interest in the subject.



B. Involving all class members

Once the five-member team has been selected, other class members can engage in activities related to preparing and staging the Fed Challenge, such as:

- gathering research and conducting surveys of consumer and business attitudes about the economy
- interviewing members of the community (e.g., managers, workers, shoppers, government officials)
- preparing charts, overheads or computer-generated slides
- producing videos to complement the presentation
- judging practice sessions and providing feedback
- studying the parts of others to serve as an alternate team member



C. Developing the presentation

1. FUNDAMENTAL DECISIONS:

Teams must make two basic decisions before putting their presentations together: 1) which data to include; and 2) which format to use.

Data

Picking gems of data from the wealth of information available may well be the hardest part of the Fed Challenge. Many teams have lost themselves in a self-created morass of economic detail, and few judges can resist pouncing on key indicators that get

used in misleading ways. This combination suggests that data should be used judiciously and understood completely.

Understanding the data is especially important, for a presentation shouldn't be a reading of indicators so much as an analysis of what those indicators mean. Moreover, when putting their presentations together, teams would do well to remember that, as they give their ideas about the economy, they're also giving judges ideas for follow-up questions.

That said, the teams can use their 15-minute presentation to feature whatever data they want. Almost all of the presentations, however, include a discussion of the following three economic statistics: Gross Domestic Product, Consumer Price Index, and Nonfarm Payroll Employment. Notwithstanding these basics, Fed Challenge teams invariably go their own way, each addressing a set of indicators, which, for reasons the team should be prepared to explain, strike it as significant. (Remember: the ultimate goal is to decide whether and to what extent the Federal Reserve should raise or lower short-term interest rates.)

Economic analyses seldom overlap—not at the Fed Challenge and, as the following examples attest, not in real life either. Exhibit A is a newspaper story not unlike those appearing in major dailies around the country. And though the names and dates aren't real, the story incorporates a dozen or more measures of economic performance in support of its headline, "U.S. Economic Growth Slowing." Exhibit B is a different sort of analysis, consisting of regional information, some even of an anecdotal nature, compiled by the staff of a Reserve Bank in what's known as the Beige Book. Teams may find Exhibit C to be most revealing, however, in that it lists the actual (and surprisingly disparate) indicators discussed by two Fed Challenge teams in last year's finals.

U.S. Economic Growth Slowing, Data Indicate

Government Official Points to 3rd-Quarter Drop

The U.S. economy grew in the second quarter of this year at a faster rate than earlier estimated, but a senior government official said that since then growth “clearly is starting to slow down.”

The Commerce Department yesterday raised its estimate of second-quarter growth to a 5.9 percent annual rate — the highest in more than a decade — from the 5.7 percent rate first calculated. Growth is measured by the change in the nation’s gross domestic product — the total value of goods and services produced — adjusted for inflation. The regularly scheduled revision was based on information not available when the first estimate was made last month.

Coming at a time of low unemployment, the growth sparked concerns that it could cause an increase in inflation. Even though there was no sign that that had happened yet, Fed policy makers raised short-term interest rates in June to cool off the economy a bit and keep inflation from worsening. At a subsequent meeting last week, Fed officials, believing that growth is tapering off, chose not to raise rates again.

John Stanley, economist at the U.S. Treasury, told reporters yesterday, “The data for the third quarter thus far indicate that the economy clearly is starting to slow down.”

Meanwhile, in a separate report, the Commerce Department provided what analysts said is added evidence of that slowing. Sales of new homes fell in July

after rising 3 percent in June. The July figure was close to the selling pace of the final three months of last year.

The revised GDP figures show that neither consumer spending nor business investment in new structures went up quite as fast as first thought. But business inventories, exports and state- and local-government spending all increased more rapidly than estimated last month. On the other hand, prices paid for domestic goods and services rose at a 2.2 percent rate in the second quarter, slightly less than the 2.3 percent first reported.

As Stanley indicated, since the end of the of the second quarter, a range of economic statistics covering retail sales, payroll employment and other economic activity has pointed to much slower growth. For example, consumer spending, which increased at a 5.7 percent rate in the April-June period, appears to be rising only about a third as fast in the current quarter. Part of that softness was evident in retail sales, which were flat in June and fell last month; and surveys of auto dealers have found that sales of new and light trucks have been weaker this month.

A number of forecasters predict that GDP will increase this quarter at a 2 percent rate or perhaps even less, because of smaller gains in consumer spending and smaller increases in factory output as firms try to reduce some of the stock of unsold goods they accumulated in the second quarter.

V-1

FIFTH DISTRICT-RICHMOND

Overview: Economic growth in the Fifth District was brisk in May, although a few sectors showed some deceleration. The manufacturing and service sectors continued to grow rapidly, while retail trade lost some of its vigor of earlier months. Commercial real estate activity increased further, and sources said that in residential real estate was mixed. Driven by stronger demand, bank lending edged up after several lackluster months. In agriculture, May's unseasonably cool and dry weather slowed crop development and hampered planting activity. Overall price were less pronounced, and despite tighter labor markets, fewer reports of wage pressures were received.

Retail Trade: District retailers reported that activity grew more slowly in recent weeks. Sales revenues grew at lower rates; several contacts cited cooler-than-normal weather as the main reason for more sluggish sales growth. Customer traffic and sales of big-ticket items increased only slightly, and retailers noted rising inventories. Employment and wage growth eased somewhat and retail prices were little changed. Retailers generally remained optimistic, although fewer expected

demand to pick up in the coming six months.

Services: Service-sector activity continued to expand briskly. Revenue growth was particularly strong in the real estate, financial, and health services sectors. However, revenue in wholesale trade and dropped sharply in business services. Service employment and wage growth picked up during the month, and prices rose at slightly faster rates. Service-sector contacts lowered their expectations of future demand.

Manufacturing: Manufacturing activity continued to expand at a strong pace in recent weeks. Overall shipments remained at record levels but those in the apparel, furniture, and printing industries weakened. The volume of new orders increased at a generally faster pace, but producers of paper goods, electric equipment textiles, and industrial machinery saw the...

In planning your presentation, you may want to consider the indicators discussed by two Fed Challenge teams who appeared in the 1997 finals.

TEAM A

Gross Domestic Product
Consumer Price Index
Producers Price Index
Housing Starts
Capacity Utilization
Unemployment
Retail Sales
Productivity
Wages

TEAM B

Gross Domestic Product
Real GDP Growth
Purchasing Managers Index
Durable Goods
Civilian Unemployment Rate
Civilian Labor Force
Consumer Price Index
Core CPI
Producers Price Index
Composite Index of Leading Indicators
Construction Spending
Total Home Sales
Consumer Confidence
Real Exports of Goods and Services
Unemployment (Actual number of people unemployed)
Unemployment Rate
Employees on Nonfarm Payrolls
Average Weekly Hours Worked
Average Hourly Earnings
Employment Cost Index
Productivity
New Orders Index
Housing Sales
Construction Spending
Raw Materials Costs
Factory Orders
Unfilled Orders
Wage Gains
4-Week Jobless Claims
Duration of Unemployment
Productivity

More information about these and other indicators—from what they mean to when they’re reported—is provided in the Appendix.



Format

Although there is no prescribed format for a Fed Challenge presentation, teams generally present in one of three ways: FOMC role play, business-style presentation, and television news panel.

i) FOMC role play:

With this approach, the five team members play the role of Reserve Bank presidents, sometimes going so far as to sit behind nameplates of their specific role models. Such formats might begin with an overview of the specific Federal Reserve District and economic conditions (from the Beige Book) of concern to the “Bank president.”

This is followed by a discussion of national economic and financial conditions, which often results in participants’ putting forth different monetary policy prescriptions. For example, as a slide of an economic indicator comes on the screen, one “Bank president” may say, “Given the GDP increases in each of the last four quarters, I think we should raise interest rates 25 basis points.”

A second “Bank president” might counter: “No, interest rates should stay where they are. Despite the GDP data, this slide reveals that Nonfarm Payroll Employment has recently peaked and that fears that the economy will overheat are no longer relevant.”

So the role play continues, with each recommendation supported by data of particular relevance to the District of the “Bank president” who makes it. Such discussions end with a vote, much as real FOMC meetings do, and an articulation of whatever consensus is reached.

ii) business-style presentation:

Team members put together their presentation in a logical way, beginning with an economic overview and ending with a monetary policy recommendation. They then break the presentation apart, assigning a logical component to each participant and coming up with visuals for the indicators most critical to their recommendation.

This approach generally opens with a statement to the effect that “Many economists have described our economy as being in a soft patch.” The lead speaker can then follow with the team’s forecast for the general economy and a discussion of recent FOMC deliberations.

A second team member might turn the discussion into an in-depth examination of current economic conditions and their implications for the near term. Several indicators could be addressed fully (and visually), especially if they’re deemed by the team to be “warning signs” or particularly illuminating in understanding overall economic conditions.

A third member could extend the examination, highlighting another two or three indicators in the process. Again, visuals typically are used for data that are key to the team's ultimate recommendation. The fourth team member might even do the same, drawing insights from yet another series of indicators.

That would leave the summary and the recommendation to the team's fifth member. This key presenter probably should address two or three policy options before homing in on the course of action that's most consistent with the team's collective insights.

iii) television news panel:

This format, ubiquitous on weekend television, has one team member acting as moderator and the other four serving as expert panelists. The moderator, in this instance, refers to an imminent meeting of the Federal Open Market Committee to determine the direction of short-term interest rates. The set-up usually includes a summary of economic conditions before the moderator solicits the views of the panel.

The panelists take turns, each focusing on a different set of variables and interpreting the implications for the near term. Visuals can greatly aid this sort of analysis by depicting economic trends. Panelists can conclude their segments with a recommendation for short-term interest rates or wait for a more formal polling toward the end of the presentation. As with real news panels, not all members need to be in sync with this approach. Here, as on TV, lively debate can make for interesting viewing. But it also can be disquieting. Moderators should be both vigilant and practiced in keeping the discussion on track, guiding the panel toward a well-reasoned and articulate close.

2. MAPPING OUT THE PRESENTATION

There is a difference between scripting a presentation and presenting from a script. The Fed Challenge encourages teams to embrace the former and to avoid the latter. This can't be stressed enough: a word-for-word script is neither necessary nor desired, even though students may feel more comfortable working from note cards.



If hand-held cards are used, the role of each is to serve as a reminder—not a crutch. No card should contain more than the basic concept the presenter wants to address. Cards that contain complete text tend to result in recitations, which undermine the Fed Challenge goal of enlivening economics. Such performances are therefore penalized for lacking fluency, imagination, and perceived spontaneity.

3. DELIVERING THE PRESENTATION

The Fed Challenge requires presentation skills no different from those needed to perform well before any audience. Although familiarity with the material can take a team a long way, students also should appreciate such communications skills as:

- focusing—Good speakers concentrate on their audience, not just metaphorically but literally. Using eye contact, they establish a relationship with as many audience members as they can—one person at a time. Specifically, they direct their gaze at someone for five-to-seven seconds, seeking to establish an “electric current” with this audience member before moving on to the next. Extremely capable speakers can hold their gaze until a reaction is elicited from the person on whom they’re focused.

- speaking—Loud and clear are the hallmarks of an effective, confident speaker. The former can be accomplished by addressing one’s remarks to the person farthest from the speaker; the latter by slowing one’s natural speaking rhythm and enunciating each syllable. Speaking works in conjunction with focusing, in that, while concentrating on the audience, a capable speaker checks for signs of comprehension or confusion.
- pausing—Timely breaks in the articulation of a point provide a speaker with considerable authority. These pauses should be taken while the speaker is exhaling slowly and looking directly at an audience member.
- gesturing—Accomplished speakers know how to gesture naturally and effectively. But even experts must take stock of their movements, assessing each gesture for its ability to reinforce the intended message and making sure it doesn’t actually distract the audience. Some phrases that virtually beg to be accompanied by a gesture refer to direction (“We see an economic expansion from the east coast to the west coast”); to feeling (“If we are to progress as a nation, interest rates cannot rise”); and to size and shape (“We are experiencing a significant increase in the rate of inflation”). Even here, however, the more natural the gesture, the more likely the speaker has practiced.

4. USING VISUAL AIDS

There may be no better way to capture an audience’s attention than with visuals. Overheads, flip charts, and computer-generated graphics can be very effective in reinforcing the points being made by a presenter. It’s seldom necessary to

create visuals from whole cloth, for relevant economic measures—presented in simple yet dramatic ways—can almost always be found in leading newspapers, business journals, Federal Reserve publications, brokerage-firm newsletters, and even over the Internet (see Appendix).

Once such a visual is found, it can simply be transposed to a form suitable for presentation. There's no need for this endeavor to discourage technological laggards. Flip charts can still be used in very effective ways. (What's more, they're immune to the snafus inherent in high-tech productions.) Overhead projectors also can add a dramatic element to a presentation, particularly if they're used to focus attention on relevant data.

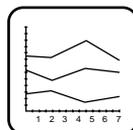
When finally presenting the visual, the speaker should take the following two steps:

- 1) Describe for the audience as explicitly as possible what it's seeing. State, for example, that "what you see here is a chart showing real GDP over the last two years, with the horizontal axis representing different quarters during the period that's being measured and the vertical axis representing change in percentage terms."
- 2) Interpret the visual for the audience. Once the audience knows what it's looking at, it's receptive to hearing your interpretation. The speaker might say that "as this chart of real GDP clearly shows, the economy may be in real danger of overheating."

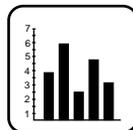
The phrase "horses for courses" is particularly applicable to visual aids. Accomplished speakers know that some graphic forms are better suited for making specific points

than others. Consider, for example, the following distinctions:

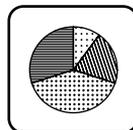
- Line charts: best for showing relative values, changes over time, and comparing two or three items. Graphs that plot more than three variables, however, can overwhelm viewers to the point of confusion.



- Bar charts: best for comparing specific statistics or illustrating easily comparable data. Be sure to place the bars in the appropriate order, whether it's chronological, ascending, or descending order.



- Pie charts: best for comparing segments to one another and to the whole. All sections must measure the same variable (e.g., dollars or percentages). Any section that contains less than 5 percent should be grouped with others like it into a category marked "others."



- Word charts: letters should be at least one-inch high before being projected. Use uppercase and lowercase letters, no more than two fonts, and no more than seven lines per chart. Be sure to leave plenty of white space. Rather than entire sentences, use key ideas or phrases, often prefaced by bullets. Example:

Structure of the Federal Reserve:

- Board of Governors
- Federal Reserve Banks
- FOMC

With charts having fewer than four bullet points, the speaker may first wish to read each point aloud before elaborating. This not only triggers the speaker's recall but, when done well, perks the audience's interest in what's to follow. Reading the bullets aloud also helps the audience to follow the speaker. On the second reading, the speaker should strive to limit the elaboration to only a few sentences. Anything longer tends to over-inform the audience and challenge its attention span.

With charts having four or more bullet points, the initial word-for-word reading should be omitted. Instead, the speaker can explain each bullet point immediately after reading it aloud the first time, thus taking the audience down the chart one bullet point at a time.

5. INCORPORATING TECHNOLOGY INTO THE PRESENTATION

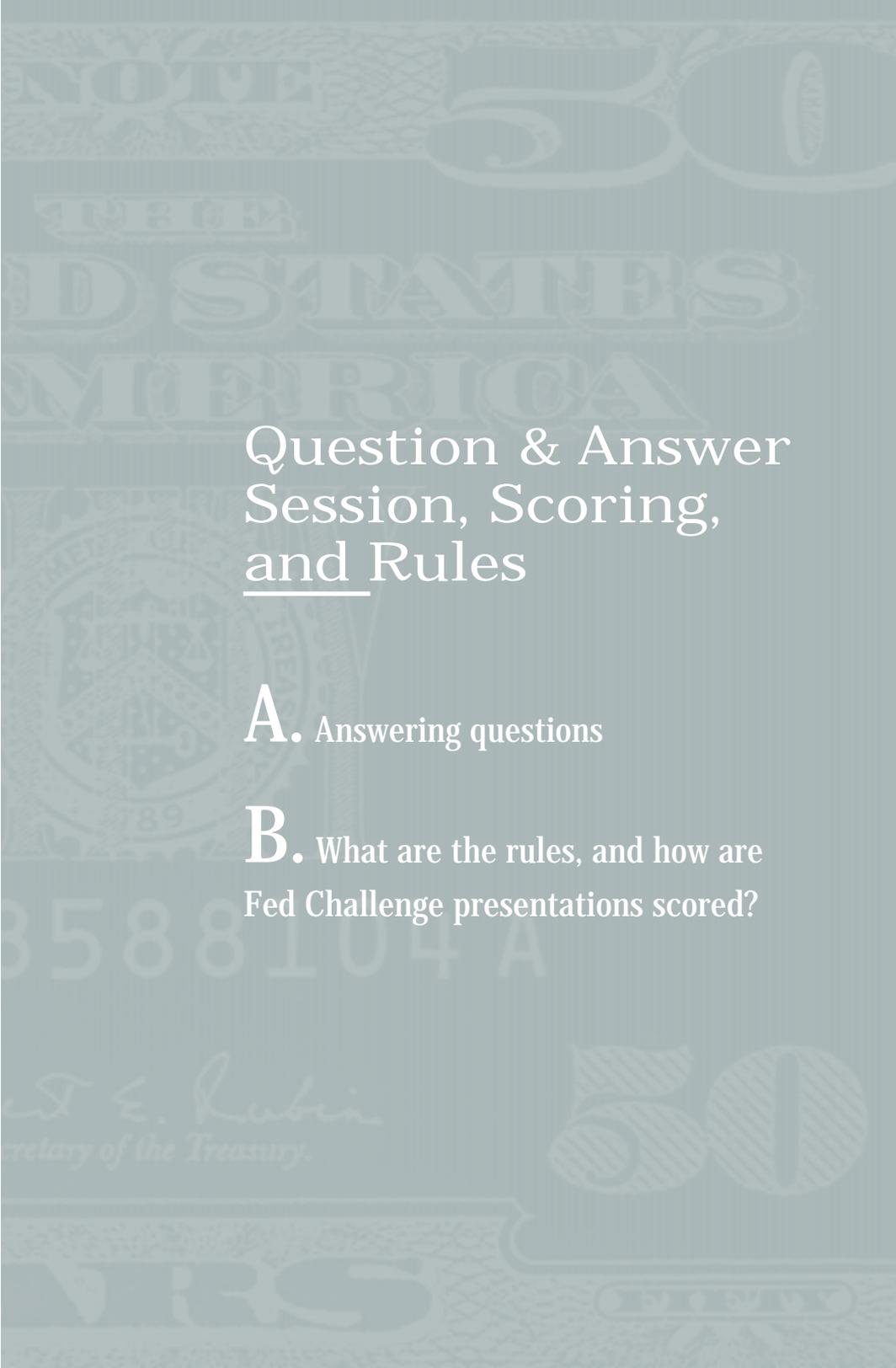
An increasing number of Fed Challenge teams are using PowerPoint and other computer-driven technologies to illustrate their presentations. The more sophisticated of these allow for animation and special effects, whereas virtually all of them generate colorful graphs and customized slides. Being technologically advanced poses its own problems, however, which can be minimized by taking the following precautions:

- Rehearse the presentation with and without the technology. This not only helps to work out the "bugs" but, in the event of a glitch or breakdown, trains the team to perform should it become unplugged.
- Check the presentation room to ensure it has the appropriate audio-visual equipment. If it doesn't, this may

necessitate bringing your own laptop computer or liquid-crystal-display projector to the Fed Challenge.

- Check out the room before each presentation. Make sure it has outlets to accommodate the specific hardware you plan to use.
- Practice projecting your visuals from the projectors and overheads you'll be using at the Fed Challenge. Be sure to consider how these visuals “play,” not just to your team but to everyone else in the presentation room. What seems “big enough” during rehearsal sometimes seems “too small” before a panel of judges.
- Consider video as well as computers. Salient features of the local economy—be they farming, auto manufacturing, or even rocket launching—make for interesting background footage. Sometimes the terrain itself (a New York skyline, Iowa wheat fields, Texas stockyards, California beaches, etc.) can serve as a complementary backdrop. Just be sure the production doesn't overwhelm the presentation.

Schools lacking access to technological support should not be dissuaded from entering the Fed Challenge. There are no points earned for using advanced technology, and, besides, judges universally prefer thoughtful deliberations to razzle-dazzle displays.



Question & Answer Session, Scoring, and Rules

A. Answering questions

B. What are the rules, and how are
Fed Challenge presentations scored?

A. Answering questions

Without doubt, the most difficult part of the Fed Challenge is answering questions from the panel of judges. This challenge begins with the questions themselves, and the team's ability to grasp them. If there's ever any uncertainty or haziness, the team should immediately ask for the question to be repeated or clarified. Also, as a question is being asked, a team member or two may wish to write it down. This minimizes confusion by forcing a team not only to "hear" the question but also to "see" it.



After understanding what is being asked, the challenge becomes one of formulating a response. Teams generally go about this key task in one of two ways:

- 1) **Huddling**—The team literally huddles to pool knowledge and to decide who should answer the question. If it's decided the response warrants contributions from more than one person, care must be taken to avoid redundancies and inconsistencies. One respondent's answer can address one facet of the question, and a second respondent's another facet. Or a thought expressed by the first respondent can receive elaboration from a second. Just be sure the second respondent doesn't undermine the first.

When done well, huddling promotes cooperation and teamwork. But when done poorly, the approach smacks of desperation. It sometimes appears that, even after pooling its thoughts, a team still can't summon a proper answer. Huddling also can hurt a team by slowing it down, taking time that might be better spent formulating a response to a judge's question. Here, too, practice can help.

- 2) Designating—Each individual responds to questions, or aspects of questions, in his designated area. Example: Student A might be assigned to answer any question related to the policy prescription; Student B any question related to GDP or the CPI; and Student C any question about the structure and functions of the Federal Reserve. The challenge here is to ensure the participation of the entire team. This can be helped by having Student A begin with his contribution to the first question, having Student B take the lead with the second question, and so on.

It also can be helpful to designate a team captain or leader not only to monitor the contributions of fellow contributors, but also to galvanize the team during periods of distress or paralysis.

B. What are the rules, and how are Fed Challenge presentations graded?

All rounds of the Fed Challenge—from District Competitions to Interdistrict Championships—use the same scoring rubric and adhere to the following rules:

- 1) Students may refer to, but not read from, notes or scripts.
- 2) Each team member must play a substantial role in making the presentation.
- 3) More than one team member may answer a judge's question.
- 4) While huddling to formulate a response to a judge's question is permitted, teams are cautioned that lengthy and excessive huddling will result in points being deducted, to the extent that it significantly limits the number of questions posed.

A team that performs flawlessly and adheres to all the rules can receive a maximum of 50 points for each presentation.

These points are obtained by tallying the scores—ranging from 1 to 10—for each of the following five categories:

1. Knowledge of monetary policy and of the Federal Reserve's role in its implementation
2. Responses to judges' questions
3. Quality of the presentation
4. Quality of the research and analysis
5. Evidence of team work and cooperation



CATEGORY 1

Knowledge of the Fed, current state of the economy and monetary policy

10 POINTS	<i>Always presents accurate information and demonstrates a thorough understanding of basic and sophisticated concepts.</i>
8-9 POINTS	<i>Consistently presents accurate information and demonstrates a thorough understanding of the basic concepts.</i>
5-6-7 POINTS	<i>Frequently presents accurate information and demonstrates average understanding of the basic concepts.</i>
3-4 POINTS	<i>Mixes accurate and inaccurate information and demonstrates less than average understanding of the basic concepts.</i>
1-2 POINTS	<i>Provides little accurate information and demonstrates poor understanding of the basic concepts.</i>

CATEGORY 2

Response to judges' questions

- | | |
|-----------------|--|
| 10
POINTS | <ul style="list-style-type: none">• <i>Always answers to the point and shows poise under pressure.</i>• <i>Always demonstrates the ability to think quickly.</i>• <i>Extremely persuasive in defending positions that are challenged.</i> |
| 8–9
POINTS | <ul style="list-style-type: none">• <i>Consistently answers to the point and shows poise under pressure.</i>• <i>Consistently demonstrates the ability to think quickly.</i>• <i>Convincing in defending positions that are challenged.</i> |
| 5–6–7
POINTS | <ul style="list-style-type: none">• <i>Frequently answers to the point and shows poise under pressure.</i>• <i>Frequently, demonstrates the ability to think quickly.</i>• <i>Adequately defends positions that are challenged.</i> |
| 3–4
POINTS | <ul style="list-style-type: none">• <i>Occasionally answers to the point and shows poise under pressure.</i>• <i>Occasionally demonstrates the ability to think quickly.</i>• <i>Less that adequately defends positions that are challenged.</i> |
| 1–2
POINTS | <ul style="list-style-type: none">• <i>Rarely answers to the point and shows poise under pressure.</i>• <i>Rarely demonstrates the ability to think quickly.</i>• <i>Provides poor defenses for positions that are challenged.</i> |

CATEGORY 3

Quality of the Presentation

- | | |
|---------------|--|
| 10
POINTS | <ul style="list-style-type: none">• <i>Extremely persuasive in advocacy role.</i>• <i>Always demonstrates logical and coherent organization.</i>• <i>Each student speaks with great confidence and with sufficient volume to be heard by all.</i>• <i>Always integrates audio-visual aids/media appropriately.</i>• <i>Students never read from notes or a script.</i> |
| 8–9
POINTS | <ul style="list-style-type: none">• <i>Persuasive in advocacy role.</i>• <i>Consistently demonstrates logical and coherent organization.</i>• <i>Most students speak with confidence and with sufficient volume to be heard by all.</i>• <i>Consistently integrates audio-visual aids/media appropriately.</i>• <i>Students rarely read from notes or a script.</i> |

- 5-6-7
POINTS
- *Frequently persuasive in advocacy role.*
 - *Frequently demonstrates logical and coherent organization.*
 - *Some students speak with confidence and with sufficient volume to be heard by all.*
 - *Frequently integrates audio-visual aids/media appropriately.*
 - *Students occasionally read from notes or a script.*
- 3-4
POINTS
- *Occasionally persuasive in advocacy role.*
 - *Occasionally demonstrates logical and coherent organization.*
 - *Few students speak with confidence and with sufficient volume to be heard by all.*
 - *Occasionally integrates audio-visual aids/media appropriately.*
 - *Students frequently read from notes or script.*
- 1-2
POINTS
- *Rarely persuasive in advocacy role.*
 - *Rarely demonstrates logical and coherent organization.*
 - *Students speak with a minimum of confidence and with insufficient volume to be heard by all.*
 - *Rarely integrates audio-visual aids/media appropriately.*
 - *Students depend heavily on notes or a script.*

CATEGORY 4

Research and analysis

- 10
POINTS
- *Conclusions drawn from the data are always logical and insightful.*
 - *Recommendations are always supported by relevant data.*
 - *A wide variety of authoritative sources is used.*
- 8-9
POINTS
- *Conclusions drawn from the data are, most often, logical and insightful.*
 - *Recommendations are consistently supported by relevant data.*
 - *Mostly authoritative sources are used.*
- 5-6-7
POINTS
- *Conclusions drawn from the data are, frequently, logical and insightful.*
 - *Recommendations are frequently supported by relevant data.*
 - *Some authoritative sources are used.*

3–4
POINTS

- *Conclusions drawn from the data, are occasionally logical and insightful.*
- *Recommendations are occasionally supported by relevant data.*
- *Few authoritative sources are used.*

1–2
POINTS

- *Conclusions drawn from the data lack logic and insight.*
- *Recommendations are rarely supported by relevant data.*
- *Authoritative sources are ignored.*

CATEGORY 5

Teamwork and cooperation

10
POINTS

- *Each team member plays a substantial and integral role.*
- *Demonstrates extensive evidence of coordination among team members.*

8–9
POINTS

- *Although some team members play a greater role than others, each student contributes significantly.*
- *Demonstrates significant evidence of coordination among team members.*

5–6–7
POINTS

- *Some team members dominate, while the others contribute to varying degrees.*
- *Demonstrates some evidence of coordination among team members.*

3–4
POINTS

- *Some team members dominate, while the others make modest contributions.*
- *Demonstrates little evidence of coordination among team members.*

1–2
POINTS

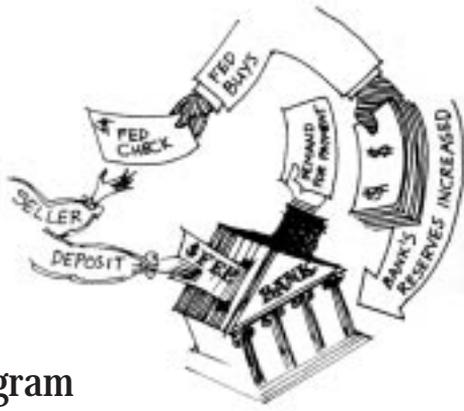
- *One or two team members dominate, while the others contribute negligibly.*
- *Demonstrates insignificant evidence of coordination among team members.*



The Tournament

A. District program

B. Interdistrict program



A. District program

For teachers, the Fed Challenge begins with an orientation in the fall (some two-to-four months before the first student performances, which start as early as February in some Districts), gains steam in March, and concludes by the middle of April.

The teachers' orientation, frequently held at the nearest Reserve Bank, sets the calendar, establishes the ground rules, and provides a forum for would-be teacher participants to ask questions. Teachers who then decide to enter a team can do so through the Federal Reserve Bank or Branch in which their school is located. In some Districts, they'll be asked to specify whether their team's participation will be in a competitive or a non-competitive division. Non-competitive teams sometimes present before the same expert judge or judges as competitive teams. Instead of being scored, however, they receive feedback in the form of constructive criticism.

The number of entries determines the District's competitive-league program, which can have as many as three rounds—preliminary, semi-final, and final—or as few as one. Most early-round presentations are held at the Reserve Bank in the team's District, although universities or business offices are sometimes used. The presentations themselves typically take place in conference rooms, where, aside from the presenters, only judges and the team's teacher are in attendance. Some Districts schedule presentations during the school day, others after class or on weekends.

Reserve Banks award a certificate to every student who participates in the District program, and some go so far as to

acknowledge participation by presenting students with letters of achievement to colleges. For each District's winning and second-place teams, the awards typically include trophies and other prizes. Some Banks award gifts to team teachers as well.

Of course, the winning team and its teacher also receive an expense-paid trip to Washington, D.C.—travel, lodging, and meals are courtesy of participating Reserve Banks—where they represent their District in the Fed Challenge's Interdistrict Final.

B. Interdistrict Finals

The Interdistrict Finals take place as part of a three-day event which occurs on a Saturday, Sunday, and Monday in late April or early May.



On Saturday, soon after arriving in Washington, D.C., the teams participate in various inter-group activities.

On Sunday, participants take a tour of the city. That evening, at the Fed Challenge Banquet, regional champions continue to meet one another. The evening's highlight is an exchange of gifts between individual team members representing different Reserve Banks.

On Monday, the finalists from each of the Reserve Banks square off for the Interdistrict Finals. These finalists, left undisturbed in the morning to update and refine their presentations, are then brought together for lunch at the Board of Governors.

Each of the teams gives its presentation after lunch in the room actually used for Federal Open Market Committee meetings. This final round of presentations follows the same rules and format as previous rounds. The only difference is that it's judged by actual members of the FOMC, including a member of the Board of Governors and two Federal Reserve Bank presidents.

All students who participate in the Interdistrict Finals receive special awards. The winning team also receives the FOMC Cup. These awards are given out during an informal reception following the Interdistrict Finals, after which the teams return home—fulfilled and broadened, we hope, by their Fed Challenge participation.

Appendix

A. Background information

B. News and commentary

C. Internet opportunities

D. Index of leading economic indicators

E. Widely used indicators The Top 12

F. Actual scoring rubric

A. Background information

A Fed Challenge team should have both a strong familiarity with the Federal Reserve System and an up-to-the-minute take on Fed activities as they relate to the domestic economy.

For background, we recommend:

- *The Federal Reserve System: Purposes & Functions*, published by the Board of Governors of the Federal Reserve System;
- *The Story of Monetary Policy*, published by the Federal Reserve Bank of New York, New York, NY, 1996; and
- *The Federal Reserve Today*, published by the Federal Reserve Bank of Richmond.

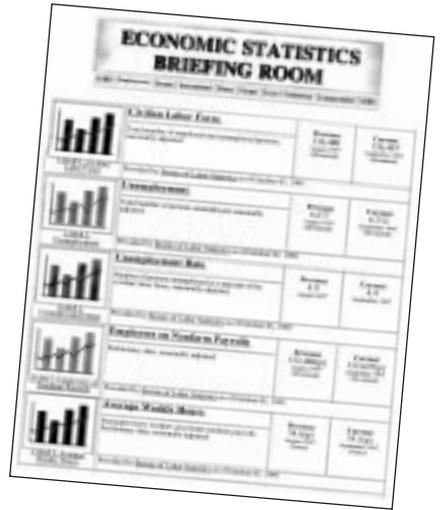
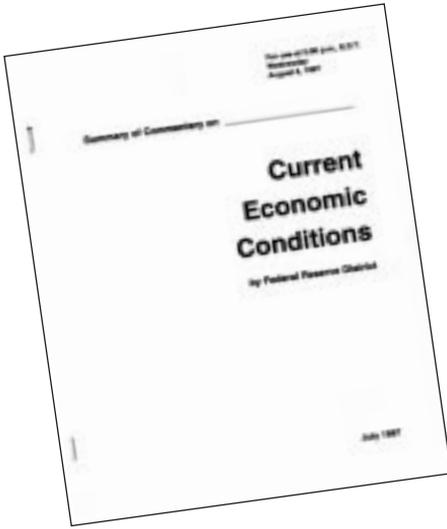
B. News and commentary

For up-to-the-minute news, analysis, and commentary, the media provide a never-ending stream of possibilities:

- The business pages of major national dailies (e.g. *The New York Times*, *The Washington Post*, and *USA Today*) and local newspapers are rich repositories of economic data that can be incorporated into Fed Challenge presentations. Many of these newspapers also can be accessed through the Internet.
- Magazines and journals like *Barron's*, *Business Week*, *Forbes*, *Fortune* and *The Journal of Commerce* provide excellent research and analysis of the current economy.



- Cable networks, such as CNBC and CNNfn, update economic data daily.
- Securities firms and local brokerage houses supply economic data to customers and to the public in their newsletters.
- University-based economists can provide economic data and forecasts.
- The Federal Reserve System publishes, in addition to the two primary sources already mentioned, a wealth of materials that can serve as the basis for understanding the role of the Federal Reserve in formulating and implementing monetary policy. Although a complete listing is available in the *Catalog of Public Information Materials*, published by the Federal Reserve Bank of New York, the System's most popular offerings include:
 - *The Federal Open Market Committee: A Series on the Structure of the Federal Reserve System—No.2*, Board of Governors of the Federal Reserve System, Washington D.C.;
 - *National Economic Trends*, Federal Reserve Bank of St. Louis; and
 - *Understanding Open Market Operations*, written by M.A. Akhtar and published by the Federal Reserve Bank of New York.
- The Beige Book or, as it is formally known, *Summary of Commentary on Current Economic Conditions by Federal Reserve District*, is an important source for anecdotal information on regional economies. It is distributed approximately two weeks before each FOMC meeting and covered by the press the day after it is issued. Copies may be obtained at any Federal Reserve Bank or Branch.



C. Internet opportunities

Websites also can be a handy source of current data. For starters, the ones listed below are those of various Reserve Banks and the Board of Governors.

Office	Internet Address
Board of Governors	www.bog.frb.fed.us
Boston	www.bos.frb.org
New York	www.ny.frb.org
Philadelphia	www.libertynet.org/~fedresrv/fedpage.html
Cleveland	www.clev.frb.org
Richmond	www.rich.frb.org
Atlanta	www.frbatlanta.org
Chicago	www.frbchi.org
St. Louis	www.stls.frb.org
Minneapolis	woodrow.mpls.frb.fed.us
Kansas City	www.kc.frb.org
Dallas	www.dallasfed.org
San Francisco	www.frbssf.org

Another Website worth checking is the White House briefing page (www.whitehouse.gov/fsbr/esbr). A sample taken from this site's "Economics Statistics Briefing Room" appears above. Note that most of the data are presented with charts, which can serve as prototypes for charts created for Fed Challenge competitions.

D. Index of leading economic indicators

In working with students to develop their forecasts, many teachers begin with the index of leading economic indicators. Updated monthly by The Conference Board, a business-sponsored research organization, this index is the country's best-known beacon for finding economic turning points: a rise in the index over several months suggests a growing economy ahead; a persistent fall suggests a slowing economy ahead.

Those who prepare it, however, stress that its predictive value is enhanced when changes picked up by the indicator are significant in size, duration, and scope. Even then it can be misleading, as when five consecutive negative readings in 1975 were not followed by a recession. Teams might therefore choose to examine the individual components that make up the index, which are listed below:

- average workweek of production workers in manufacturing;
- average initial weekly claims for state unemployment insurance;
- new orders for consumer goods and materials, adjusted for inflation;
- vendor performance (companies receiving slower deliveries from suppliers);
- new orders for non-military capital goods, adjusted for inflation;
- new building permits issued;
- index of stock prices;
- money supply: M2, adjusted for inflation;

- spread between rates on 10-year Treasury bonds and Federal funds rate (the interest rate the Federal Reserve targets in conducting monetary policy); and
- index of consumer expectations.

E. Widely used indicators

The following widely used indicators are updated regularly on the Federal Reserve Bank of New York's educator page (www.ny.frb.org/pihome/educator).

1 REAL GROSS DOMESTIC PRODUCT (GDP)

Definition: The total value of goods and services produced within the borders of the United States, regardless of who owns the assets or the nationality of the labor used in producing that output. (In contrast, Gross National Product, or GNP, measures the output of the citizens of the U.S. and the income from assets owned by U.S. entities, regardless of where located.) The growth of output is measured in real terms, meaning increases in the value of output due to inflation have been removed.



Source: U.S. Department of Commerce; Bureau of Economic Analysis

Frequency: Quarterly

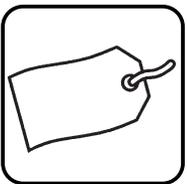
Availability: Data are typically released during the final week of the month. The first or advance estimate is released during the final week of the month following the end of a calendar quarter.

(Example: the advance estimate for Q1 would be released during the final week of April.) The preliminary and final estimates are released two and three months after the end of the calendar quarter, respectively.

Reason: The Federal Reserve's primary goal is sustained growth of the economy with maximum employment and stable prices. Real GDP is the most comprehensive measure of the performance of the U.S. economy. By monitoring trends in the overall growth rate as well as the unemployment rate and the rate of inflation, policy makers are able to assess whether the current stance of monetary policy is consistent with that primary goal.

2 CONSUMER PRICE INDEX (CPI)

Definition: An index designed to measure the change in price of a fixed market basket of goods and services. The market basket of goods and services is representative of the purchases of a typical urban consumer. The index is intended to measure pure price change only; attempts are made to remove changes in price resulting from changes in quality.



Source: U.S. Department of Labor; Bureau of Labor Statistics

Frequency: Monthly

Availability: Generally available the second week of the month following the month for which data is being released; always released after the Producer Price Index.

Reason: The rate of change of the CPI is one of the key measures of inflation for the U.S. economy. Acceleration or deceleration of inflation may signal that a change in monetary policy may be appropriate.

3 NONFARM PAYROLL EMPLOYMENT

Definition: An estimate of the number of payroll jobs at all nonfarm business establishments and government agencies. Information also is provided on the average number of hours worked per week and average hourly and weekly earnings.



Source: U.S. Department of Labor; Bureau of Labor Statistics

Frequency: Monthly

Availability: Usually the first Friday of the month for the preceding month; occasionally released on the second Friday.

Reason: Growth of employment and hours worked provide important information about the current and likely future pace of overall economic growth. Trends in average hourly earnings provide information about supply and demand conditions in labor markets, which may provide signals about the overall level of resource utilization in the economy.

4 HOUSING STARTS



Definition: An estimate of the number of housing units on which construction was started. Starting construction is defined as excavation for the footings, the foundation, or “the first shovel of dirt to break ground.” Housing starts are divided into single-family and multifamily (2+) units. Beginning construction on a 100-unit apartment building, for example, is counted as 100 starts.

Source: U.S. Department of Commerce; Bureau of the Census

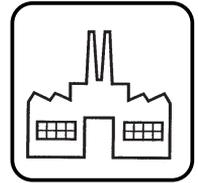
Frequency: Monthly

Availability: Around 15th of the month for the preceding month.

Reason: Housing is perhaps the most interest-rate sensitive sector of the economy. It often experiences large swings in activity in response to changes in the level of long-term interest rates such as those on mortgages. While residential investment represents just four percent of the *level* of GDP, due to its volatility it frequently represents a much higher proportion of *changes* in GDP over relatively short periods of time. Policy makers monitor the housing sector very carefully for clues about the near-term performance of the economy and for the effects of changes in financial conditions.

5 INDUSTRIAL PRODUCTION/CAPACITY UTILIZATION

Definition: An index designed to measure changes in the level of output in the industrial sector of the economy. The index is grouped by both products (consumer goods, business equipment, intermediate goods, and materials) and industry (manufacturing, mining, and utilities). From the level of production, estimates are made of the percent of capacity currently being utilized.



Source: Board of Governors of the Federal Reserve System

Frequency: Monthly

Availability: Preliminary estimate released around the middle of the month for the preceding month.

Reason: Because changes in GDP are heavily concentrated in the industrial sector, changes in this index provide useful information on the current growth of GDP. The level of capacity utilization in the industrial sector provides information on the overall level of resource utilization in the economy, which may, in turn, provide information on the likely course of inflation.

6 RETAIL SALES

Definition: An estimate of the total sales of goods by all retail establishments in the United States. (Sales of services are not included.) Data are presented in nominal, or current, dollars, meaning they are not adjusted for inflation. However, the data are adjusted for seasonal, holiday, and trading-day differences between the months of the year. Sales are categorized by type of establishment, not by type of good.



Source: U.S. Department of Commerce, Bureau of the Census

Frequency: Monthly

Availability: Advance estimate released during the second week of the month for the preceding month.

Reason: Personal consumption expenditures (PCE) represent roughly two-thirds of GDP. By monitoring retail sales, policy makers are able to make an assessment of the likely growth of PCE for the current and future quarters.

7 BUSINESS SALES AND INVENTORIES

Definition: Total current-dollar sales and inventories for the manufacturing, wholesale, and retail sectors of the economy.

Source: U.S. Department of Commerce; Bureau of the Census



Frequency: Monthly

Availability: About six weeks from the end of the month; for example, data for June are reported in mid August.

Reason: This release is the primary source of data on inventories. The rate of inventory accumulation plays a key role in determining the current pace of economic growth and often provides useful clues about the future pace of growth as well. For example, if inventories are accumulating at a rapid pace, such that inventory/sales ratios are rising, it may portend a slowing of growth in the near future as firms cut production to bring inventories back into line with sales. Alternately, if inventories are growing slowly or actually falling, it may signal a future pickup in production.

8 ADVANCE REPORT ON DURABLE GOODS SHIPMENTS, NEW ORDERS, AND UNFILLED ORDERS

Definition: Data on shipments, new orders, and unfilled orders, expressed in current dollars, for goods such as primary metals, fabricated metals, electric-generating equipment, nonelectrical machinery, information-processing equipment, and transportation equipment, including civilian and military ships, aircraft, automobiles, and light-, medium-, and heavy-duty trucks.



Source: U.S. Department of Commerce; Bureau of the Census

Frequency: Monthly

Availability: Fourth week of the month for the preceding month.

Reason: The data in this report provide information on the strength of demand, from both domestic and foreign sources, for U.S. manufactured durable goods. Rising orders, shipments, and unfilled orders suggest demand is strengthening, which likely will result in increasing production and employment, while falling orders, shipments, and unfilled orders suggest the opposite. Data in this release also provide information on the current and likely future pace of business investment in new equipment.

9 LIGHT-WEIGHT VEHICLE SALES

Definition: Total unit sales and leases of domestic and imported new automobiles and light-weight trucks (up to 10,000 pounds gross vehicle weight). Includes sales and leases to both consumers and businesses.



Source: Not-seasonally-adjusted sales data: Ward's Automotive Reports and the American Automobile Manufacturers Association. Seasonal adjustment factors: U.S. Department of Commerce, Bureau of Economic Analysis

- Frequency:** The first, second, and third ten days of each month and monthly
- Availability:** Third business day after the relevant selling period.
- Reason:** While autos are a relatively small component of the overall economy, changes in the light-weight vehicle sector often account for a large part of quarter-to-quarter changes in the rate of growth of GDP.

10 YIELD ON 10-YEAR TREASURY BOND

Definition: The current market interest rate or yield on U.S. Treasury bonds maturing 10-years in the future.

Source: Board of Governors of the Federal Reserve System

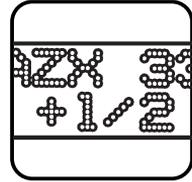


Frequency: Daily

Availability: Daily data available in most major newspapers; daily, weekly, and monthly data are reported in the H.15 report, which is released each Monday by the Fed.

Reason: Movements in long-term interest rates such as the 10-year Treasury rate provide information about likely future changes in the level of activity in the interest-sensitive sectors of the economy. For example, mortgage interest rates often move in tandem with the ten-year Treasury rate, and changes in mortgage rates often precede changes in the level of activity in housing markets.

11 S & P 500 STOCK INDEX



Definition: One of several indices designed to measure changes in price of a broad array of stocks

Source: Compiled by Standard & Poors. Available in most major newspapers and several on-line market information sources

Frequency: Daily through newspapers; instantaneous through on-line information sources

Reason: The stock market is one measure of the current value of the nation's stock of capital and is often viewed as a barometer of business and consumer confidence regarding the future. A high and/or rising stock market may signal robust growth of business investment and consumer spending in the near future while a low and/or falling stock market may signal sluggish spending. For this reason, the S&P 500 is one component of the Index of Leading Indicators.

12 M2

Definition: One measure of the nation's supply of money, defined as M1 (currency in circulation, demand deposits, travelers' checks, and other checkable deposits) plus noninstitutional money market funds and small time and savings deposits.



- Source: Board of Governors of the Federal Reserve System
- Frequency: Weekly and monthly
- Availability: H.6 report. Weekly data released each Thursday afternoon after 4:30 p.m. Monthly data released in either the second or third week of the month.
- Reason: While the strength of the relationship has weakened over time, many people believe there is a link between the growth of the money supply and the growth of nominal GDP.

F. Actual scoring rubric

CATEGORY	10 points	8–9 points	5–6–7 points	3–4 points	1–2 points
Knowledge of the Fed, current state of the economy and monetary policy	Always presents accurate information and demonstrates a thorough understanding of basic and sophisticated concepts.	Consistently presents accurate information and demonstrates a thorough understanding of the basic concepts.	Frequently presents accurate information and demonstrates average understanding of the basic concepts.	Mixes accurate and inaccurate information and demonstrates less than average understanding of the basic concepts.	Provides little accurate information and demonstrates poor understanding of the basic concepts.
Response to judges' questions	<ul style="list-style-type: none"> Always answers to the point and shows poise under pressure. Always demonstrates the ability to think quickly. Extremely persuasive in defending positions that are challenged. 	<ul style="list-style-type: none"> Consistently answers to the point and shows poise under pressure. Consistently demonstrates the ability to think quickly. Convincing in defending positions that are challenged. 	<ul style="list-style-type: none"> Frequently answers to the point and shows poise under pressure. Frequently demonstrates the ability to think quickly. Adequately defends positions that are challenged. 	<ul style="list-style-type: none"> Occasionally answers to the point and shows poise under pressure. Occasionally demonstrates the ability to think quickly. Less that adequately defends positions that are challenged. 	<ul style="list-style-type: none"> Rarely answers to the point and shows poise under pressure. Rarely demonstrates the ability to think quickly. Provides poor defenses for positions that are challenged.

CATEGORY	10 points	8–9 points	5–6–7 points	3–4 points	1–2 points
Quality of the Presentation	<ul style="list-style-type: none"> • Extremely persuasive in advocacy role. Always demonstrates logical and coherent organization. • Each student speaks with great confidence and with sufficient volume to be heard by all. • Always integrates audio-visual aids/media appropriately. • Students never read from notes or a script. 	<ul style="list-style-type: none"> • Persuasive in advocacy role. • Consistently demonstrates logical and coherent organization. <ul style="list-style-type: none"> • Most students speak with confidence and with sufficient volume to be heard by all. • Consistently integrates audio-visual aids/media appropriately. • Students rarely read from notes or a script. 	<ul style="list-style-type: none"> • Frequently persuasive in advocacy role. • Frequently demonstrates logical and coherent organization. • Some students speak with confidence and with sufficient volume to be heard by all. • Frequently integrates audio-visual aids/media appropriately. • Students occasionally read from notes or a script. 	<ul style="list-style-type: none"> • Occasionally persuasive in advocacy role. • Occasionally demonstrates logical and coherent organization. • Few students speak with confidence and with sufficient volume to be heard by all. • Occasionally integrates audio-visual aids/media appropriately. • Students frequently read from notes or script. 	<ul style="list-style-type: none"> • Rarely persuasive in advocacy role. • Rarely demonstrates logical and coherent organization. • Students speak with a minimum of confidence and with insufficient volume to be heard by all. • Rarely integrates audio-visual aids/media appropriately. • Students depend heavily on notes or a script.

	10 points	8–9 points	5–6–7 points	3–4 points	1–2 points
Research and analysis	<ul style="list-style-type: none"> • Conclusions drawn from the data are always logical and insightful. • Recommendations are always supported by relevant data. • A wide variety of authoritative sources is used. 	<ul style="list-style-type: none"> • Conclusions drawn from the data are, most often, logical and insightful. • Recommendations are consistently supported by relevant data. • Mostly authoritative sources are used. 	<ul style="list-style-type: none"> • Conclusions drawn from the data are, frequently, logical and insightful. • Recommendations are frequently supported by relevant data. • Some authoritative sources are used. 	<ul style="list-style-type: none"> • Conclusions drawn from the data, are occasionally logical and insightful. • Recommendations are occasionally supported by relevant data. • Few authoritative sources are used. 	<ul style="list-style-type: none"> • Conclusions drawn from the data lack logic and insight. • Recommendations are rarely supported by relevant data. • Authoritative sources are ignored.
Teamwork and cooperation	<ul style="list-style-type: none"> • Each team member plays a substantial and integral role. • Demonstrates extensive evidence of coordination among team members. 	<ul style="list-style-type: none"> • Although some team members play a greater role than others, each student contributes significantly. • Demonstrates significant evidence of coordination among team members. 	<ul style="list-style-type: none"> • Some team members dominate, while the others contribute to varying degrees. • Demonstrates some evidence of coordination among team members. 	<ul style="list-style-type: none"> • Some team members dominate, while the others make modest contributions. • Demonstrates little evidence of coordination among team members. 	<ul style="list-style-type: none"> • One or two team members dominate, while the others contribute negligibly. • Demonstrates insignificant evidence of coordination among team members.