

Scenario Update 1

FBIIC/FSSCC Pandemic Flu Exercise

This update covers the **scenario timeline** of
September 24th through October 7th
(Weeks 1 and 2 of the Pandemic)

Note: This exercise is designed to create an opportunity for the participants to experience a series of possible pandemic influenza environments. These scenarios are not necessarily predictive, nor do they represent the official viewpoint of any organization, group, or entity. The exercise is intended to allow the participants and their organizations to explore possible situations and to consider their options for responses and mitigation approaches. The sponsors understand that no scenario can present all aspects of a possible situation, and that there is no way to know definitively the actual circumstances that might be present during a pandemic.

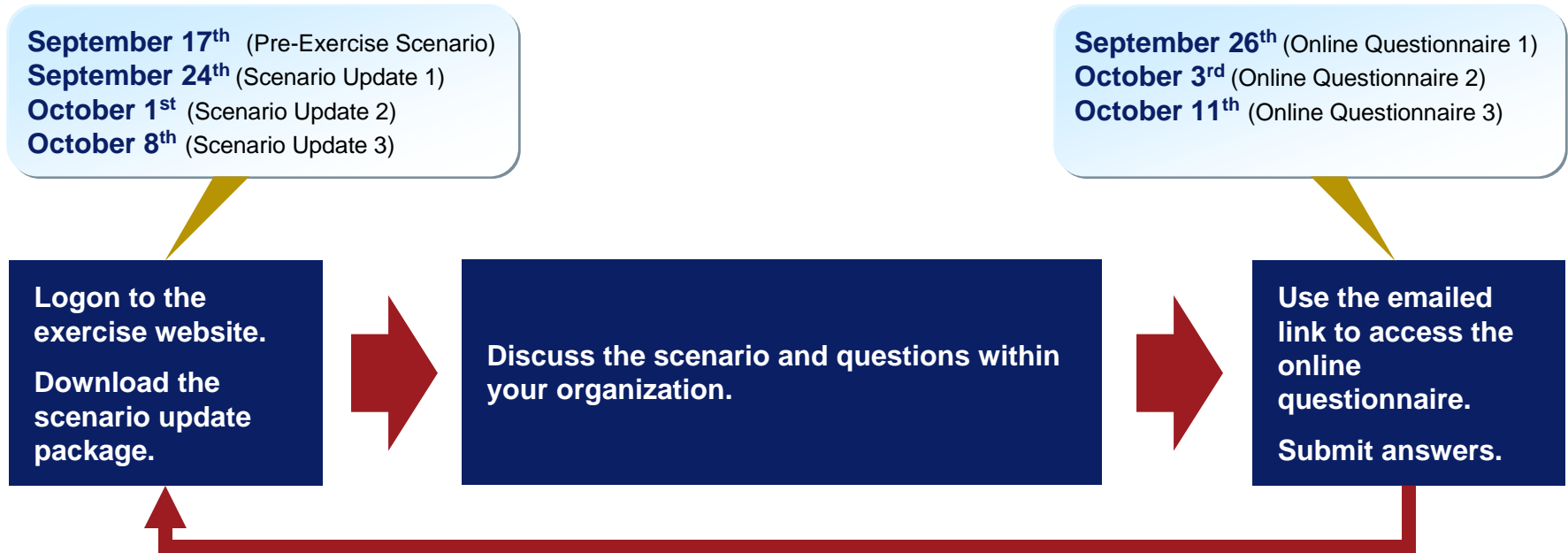
Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Exercise Overview

- ▶ **HOW TO PARTICPATE:** Financial organizations within the United States are voluntarily registered for the exercise on the website (www.fspanfluexercise.com). This website serves as the point of distribution for the exercise briefing materials and the scenario information.
- ▶ **WHO SHOULD BE INVOLVED:** This exercise and its accompanying scenario have been designed to be flexible and to allow each organization to engage as many functions as it deems appropriate. These functions may include business continuity, operations, human resources, and even senior leadership decision making.
- ▶ **SCENARIO UPDATE PACKAGE:** The scenario is presented in two formats for your convenience. The first – a detailed briefing – provides the status of the pandemic with details on absenteeism, and economic, market, and societal impacts. The second – a matrix – parallels the briefing but contains less detail for quick reference. Following the matrix are a set of questions designed to assist organizations in exploring the impact of the events described in the scenario on their operations.
- ▶ **FINDING ADDITIONAL INFORMATION:** Background information regarding pandemic influenza, financial services sector preparedness issues, and Federal government roles and responsibilities related to a pandemic, as well as a glossary, are available in the Exercise Briefing Book located on the exercise website. Please note that the exercise will not simulate the provision of regulatory relief.

Exercise Construct/Mechanism



- ▶ On Monday at 9:00am (EDT) each week of the exercise, a scenario update and a set of questions will be released for participants to download via the exercise website (www.fspanfluexercise.com). The point of contact will receive an automatically generated email from fspanfluexercise@surveymonkey.com containing a link for the organization to complete the online questionnaire. Participants will have until 5:00pm (EDT) on Wednesday each week to complete the online questionnaire.
- ▶ The same process and timing will occur each week of the exercise, with the exception of the final week of the exercise. Participant involvement in the exercise will end by 5:00pm (EDT) on Thursday, October 11th (due to the Columbus Day holiday) with each participant's final response to the online questionnaire.

Using the Absenteeism Distribution Information

- ▶ As part of this exercise, we are including absenteeism distribution information for those organizations that wish to simulate at an individual level who will or will not be working during each phase of the pandemic. While the scenario will set the absenteeism in society for each phase, the absenteeism distribution information enables each financial organization to explore the implementation of their business continuity plans against a list of specific staff who are unable to work.
 - Being “absent” in the context of the exercise means that an individual is **unavailable to work**, even if he or she has telecommuting capabilities.
- ▶ Each week, a list of letters of the alphabet will be provided with the exercise materials. These letters represent the first letters of the last names of your employees. Employees whose last names begin with these letters should be considered as absent during the entire period of the next scenario update. If you are participating as a business unit, and not as an entire organization, apply the list of letters to your business unit alone to discover who will be absent.
- ▶ In the exercise, absent individuals are simulated to be absent from their normal roles. Individuals who are part of your exercise team may continue to help your organization participate in the exercise even if the absenteeism distribution information has indicated that they are absent from their normal roles.
- ▶ Please note that the letters indicating the absent individuals will be provided to you a week in advance of when they will be used. This will provide you with an adequate amount of time in which to review your Human Resources records, identify the absent individuals, and determine the distribution of the absent employees among your various departments/units/etc. as appropriate. Do not begin to simulate the absenteeism until you have received the next scenario update.
- ▶ **REMINDER:** During this entire scenario update (September 24th through October 7th), the target absenteeism rate is 25%. Employees with last names beginning with A, E, F, J, K, N, O, Q, T, U, V, X, Y, and Z are simulated to be absent.

Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Today's date is October 7th. The information contained here represents all that has happened from September 24th through October 7th.

H5N1 Pandemic Spreading in the United States

- ▶ On October 1st, the Centers for Disease Control and Prevention (CDC) declared a pandemic in the United States
- ▶ The CDC confirmed H5N1 human-to-human case clusters across the United States, including Atlanta, Chicago, Dallas–Fort Worth, Honolulu, Houston, Lexington KY, Los Angeles, Miami, New York City, San Francisco, Sioux Falls SD, and Washington DC
- ▶ By the beginning of October, the virus has reached pandemic levels across the entire country



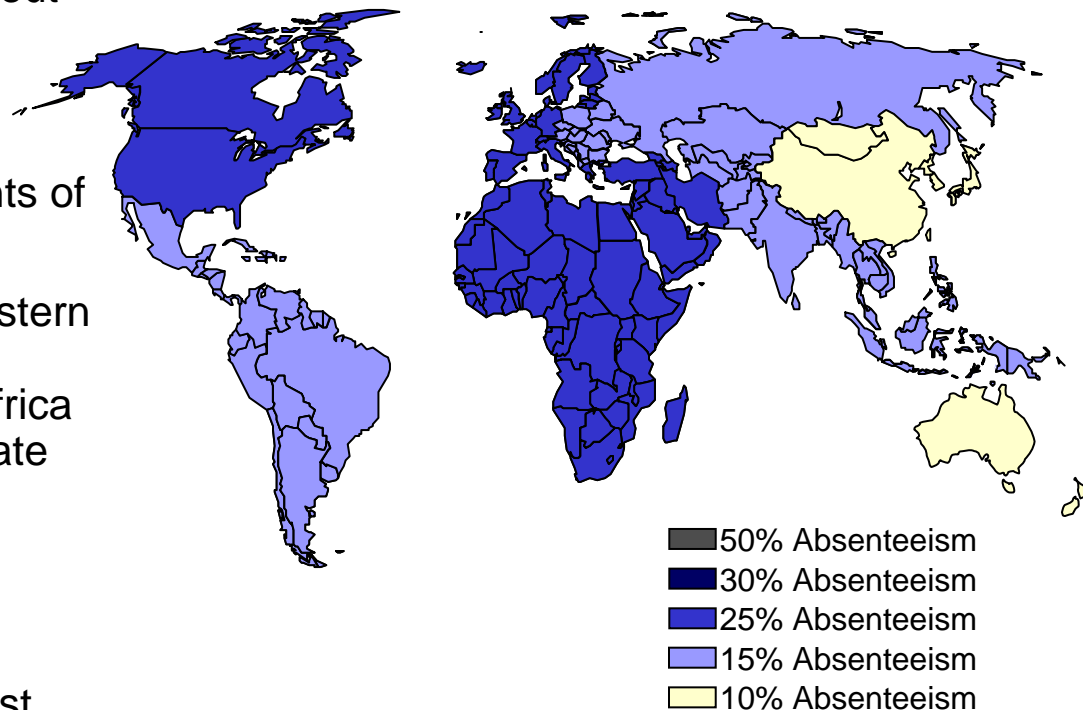
WHO and U.S. Federal Response Stages

- ▶ The World Health Organization (WHO) declares a Phase 6 pandemic alert due to the atypical and efficient H5N1 virus circulating among humans
- ▶ The United States declares Response Stage 5

World Health Organization Phases		U.S. Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	Low risk of human case	0	New domestic animal outbreak in at-risk country
2	Higher risks of human cases		
PANDEMIC ALERT PERIODS			
3	No, or very limited human-to human transmission	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
4	Increased human-to-human transmission	2	Confirmed human outbreak overseas
5	Significant human-to-human transmission		
PANDEMIC PERIOD			
6	Pandemic phase: Increased and sustained transmission in general population	3	Widespread human outbreaks in multiple locations overseas
		4	First human cases in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

Global Absenteeism Rates

- ▶ Absenteeism is on the rise throughout the globe due to myriad reasons, including concerns of becoming infected, caring for sick family members, and the impact on parents of school closings
 - All major financial centers in Western Europe, the United States and Canada, the Middle East, and Africa are averaging an absenteeism rate of 25%
 - Major financial centers in the Americas (excluding the United States and Canada), Eastern Europe, and South and Southeast Asia report a 15% average absenteeism rate
 - Northeast Asia, the Pacific, and the Australian continent are beginning to feel the effects of the pandemic, with absenteeism rates at 10% and climbing

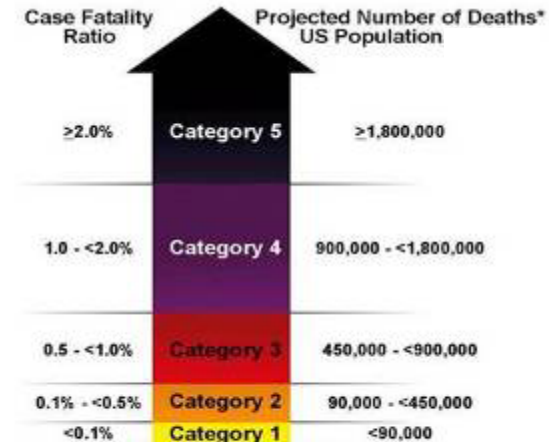


Impact of the Pandemic in the United States

- ▶ The CDC and State and local health departments are projecting that the Case Fatality Ratios (CFR) in the United States are likely to be greater than 2%, with significant human-to-human transmission
- ▶ The CDC director designates a Pandemic Severity Index (PSI) Category of 5 due to the projected high CFR in the United States and overseas
- ▶ Based on recommendations from Health and Human Services (HHS) and the CDC, states and municipalities are beginning to implement mitigation strategies appropriate for a category 5 pandemic in order to slow the spread of the pandemic
 - These strategies include actions by the public and private sectors (e.g. school closings, and canceling entertainment and sporting events) and personal/family decisions (e.g. issuing recommendations to the public to stay home if a family member is ill)

U.S. Pandemic Statistics	
Average Current Absentee Rate	25%
Cumulative Hospitalizations	474,779
Cumulative Fatalities	<100 Reported

Pandemic Severity Index



*Assumes 30% illness rate and unmitigated pandemic without interventions

Pandemic Mitigation Strategies

Intervention by Setting	Pandemic Severity Index		
	1	2 and 3	4 and 5
Home -Voluntary isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated -Voluntary quarantine of household members in homes with ill persons (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient	Recommend Generally not recommended	Recommend Consider	Recommend Recommend
School Child social distancing -Dismissal of students from schools and school based activities, and closure of child care programs -Reduce out-of-school social contacts and community mixing	Generally not recommended Generally not recommended	Consider: ≤ 4 weeks Consider: ≤ 4 weeks	Recommend: ≤ 12 weeks Recommend: ≤ 12 weeks
Workplace/Community Adult social distancing -Decrease number of social contacts (e.g., encourage teleconference, alternative to fact-to-face meetings) -Increase distance between persons (e.g., reduce density in public transit, workplace) -Modify, postpone, or cancel selected public gathering to promote social distance (e.g., postpone indoor stadium events, theater performances) -Modify work place schedules and practices (e.g., telework, staggered shifts)	Generally not recommended Generally not recommended Generally not recommended Generally not recommended	Consider Consider Consider Consider	Recommend Recommend Recommend Recommend

NOT FOR PUBLIC RELEASE/FOR EXERCISE PURPOSES ONLY

Impact on the Healthcare Sector

- ▶ The national media is reporting that the U.S. healthcare system is becoming overwhelmed
 - The rate of hospital admissions is climbing nationwide, with estimates of over 474,000 related to H5N1
 - Intensive Care Units (ICUs) are at 95% of maximum capacity
 - Elective surgery is being delayed due to the burden of the pandemic

- ▶ Hospitals are reporting a shortage of ventilators and trained technicians, and are seeking assistance

- ▶ Across the country, local officials are negotiating with hotels, convention centers, and other owners of large venues to set up triage and treatment centers

- ▶ Public health officials are concerned that any activation of medical personnel for duty with the National Guard will draw needed resources from hospitals where the surge is expected to cause the most critical shortages

- ▶ First responders are requesting that they receive pre-pandemic vaccine inoculations and antivirals in the event that they become sick

- ▶ Delays in ambulance response are nearing three hours between the call to 911 and the arrival of the ambulance



Antivirals, Personal Protective Equipment, and Vaccine

- ▶ The Federal government reiterates its guidance on antivirals and personal protective equipment (PPE) to the private sector
- ▶ The CDC states that, while the efficacy of existing pre-pandemic vaccines cannot be predicted, there is reason to believe they may provide some level of protection for priority personnel and those at greatest risk
 - H5N1 will continue to evolve, requiring continuous evaluation of stockpiled pre-pandemic vaccines and antivirals
- ▶ Development of a vaccine tailored to the pandemic strain has begun; however, initial distribution is expected to be about three to five months away
- ▶ HHS and the CDC are providing guidance to State governors on priority distribution of the vaccine when it becomes available
- ▶ Major TV networks are reporting shortages of antiviral drugs throughout the United States
 - The CDC recommends that state governments use their stockpiles only for treatment of confirmed cases



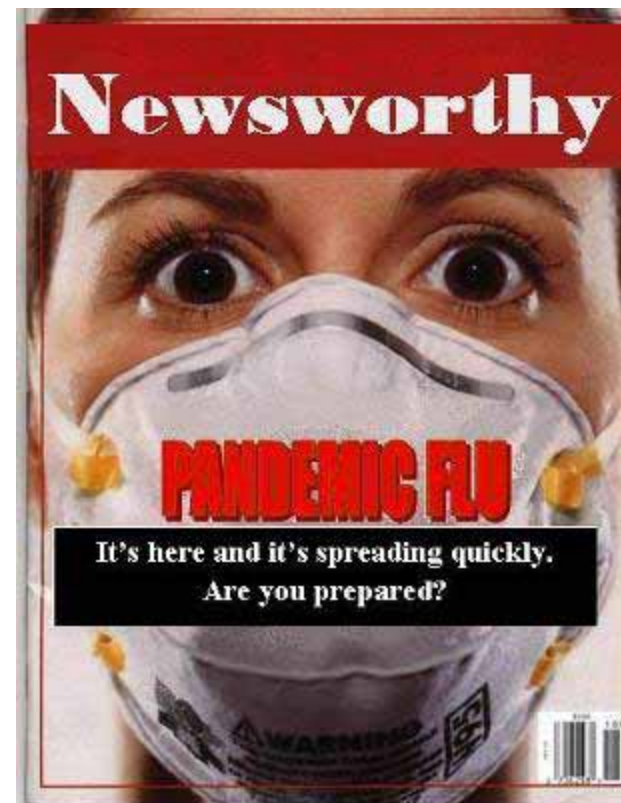
Retail/Wholesale Consumer Supplies

- ▶ The national media is noting that the general public is moving towards survival mode
 - Supermarkets are experiencing difficulties in keeping shelves stocked with non-perishables due to a much higher consumer demand and a reduction in deliveries from suppliers
- ▶ The availability of all types of consumer, office, and commercial supplies and products has decreased 15% and delivery delays have begun to rise



Downturn in Economic Activity in the United States

- ▶ Economic activity has begun to decline across the United States
 - Many businesses, including durable goods, wholesale, and retail, are experiencing declining sales and some are furloughing idled workers
- ▶ S&P 500, FTSE, and NIKKEI are showing continued signs of decline
- ▶ Markets are seeing a flight to quality
 - In emerging markets, new equity issuances are drying up and volumes are declining
 - Volumes in U.S. markets are increasing
- ▶ The value of the U.S. Dollar continues to rise



Financial Market Impacts

- ▶ U.S. stock markets are reporting a 5% decline in price, and volatility is high
- ▶ The prices of U.S. Government securities are bid up further as U.S. investors increase their efforts to reduce their exposure to risk
- ▶ The yield on the U.S. ten-year bond falls another 25 basis points
- ▶ Commodities prices decline another 10%
- ▶ With the prospect of reduced U.S. demand as a result of the pandemic, oil prices fall \$10 per barrel
- ▶ For U.S. Treasury bill, note, bond, and Treasury Inflation Protected Securities (TIPS) auctions, organizations are having to rely on the telephone to call in bids due to short staffing

Market Data Firms

- ▶ Market data firms are expressing concerns of possible disruptions of service to the financial sector due to absenteeism
- ▶ For users not connected via dedicated lines, access to real-time market data is disrupted as internet traffic increases and data download times increase
 - This is impacting end users (both clients and traders)

Impact on Banks

- ▶ As the pandemic spreads across the country, public health officials are cautioning people to avoid standing in lines and crowded places where the virus may be easily spread
- ▶ The financial press is recommending that customers activate (or expand) online access services with their banks, brokers, and other financial institutions
 - Customer traffic at banking offices has declined as more customers use online services for their needs
 - Demand for online accounts surges 35%, especially among customers who have never previously used online services
 - Online payments using credit cards are increasing for utilities and other bills
 - Call center volume is 20% above normal
- ▶ As the media reports increasing cases of pandemic influenza, there is a 15% increase in withdrawals from ATMs
 - Banks are reporting that 85% of all ATMs are operational



Impact on Insurance Industry

- ▶ Customers are experiencing a degraded level of call center service as claim center employees working from home attempt to handle calls
- ▶ Companies are reporting a 15% increase in short term disability claims
- ▶ There is a 10% increase in health insurance claims
- ▶ There is a 3% decrease in property/casualty insurance call volume
- ▶ As government authorities begin to cancel public events and close venues, business disruption insurers field questions about whether existing policies cover acts of civil authority

Financial Overview: Major Indicator Reactions (Value)

Change During the Period of Time in Each Scenario Update		
	Pre-Exercise	Update 1
FTSE	-5%	-10%
S&P 500	0	-5%
NIKKEI	-5%	-5%
Spot Commodity Prices (CRB Industrials)	-5%	-10%
Spot Crude Oil (change in \$/barrel, West Texas intermediate)	-\$5	-\$10
USD (\$) (FRB trade weighted index)	5%	2.5%
US Federal Funds Rate (basis points)	0	0
US 3-Month T-bill Rate (basis points)	0	-25
US 10-Year Treasury Security (basis points)	-25	-25

Yellow indicates current scenario update

Financial Overview: Major Market Reactions (Volumes)

Average Daily Volume for the Period of Time in Each Scenario Update		
	Pre-Exercise	Update 1
NYSE and NASDAQ combined	8 billion shares	10 billion shares (near historic highs)
CME	12 million shares	15 million shares (near historic highs)
UK	1.5 billion contracts	2.1 billion contracts (return to normal level)
Hong Kong	4.3 billion shares	4.3 billion shares (normal level)
Japan	2.1 billion shares	2.1 billion shares (normal level)

Note: Options volumes are tracking stock volumes

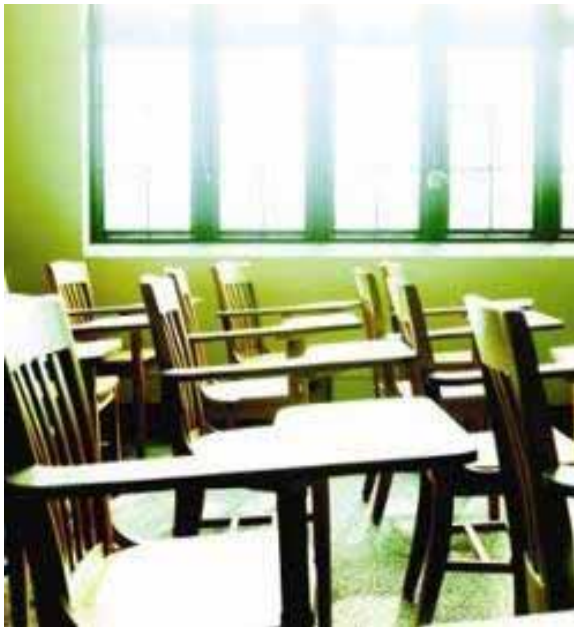
Yellow indicates current scenario update

Financial Overview: Bond Market Auctions

Security Type	Announcement Date	Auction Date	Settlement Date	Maturity Date	Publicly Held Maturing (billions)	SOMA Maturing (billions)	Offering Amount	New Cash/Paydown for Settlement Date (billion)
13-week bill	Thu, 9/20/07	Mon, 9/24/07	Thu, 9/27/07	12/17/07			16.00	
26-week bill	Thu, 9/20/07	Mon, 9/24/07	Thu, 9/27/07	3/27/08			15.00	
4-week bill	Mon, 9/24/07	Tue, 9/25/07	Thu, 9/27/07	10/25/07	45.00	16.80	8.00	6.00 PD
2-year note	Mon, 9/24/07	Wed, 9/26/07	Mon, 10/1/07	9/30/09			18.00	
5-year note	Mon, 9/24/07	Thu, 9/27/07	Mon, Oct. 1, 2007	9/30/12	19.70	6.90	13.00	11.30 NC
13-week bill	Thu, 9/27/07	Mon, 10/1/07	Thu, 10/4/07	1/3/08			16.00	
26-week bill	Thu, 9/27/07	Mon, 10/1/07	Thu, 10/4/07	3/3/08			15.00	
4-week bill	Mon, 10/1/07	Tue, 10/2/07	Thu, 10/4/07	11/1/07	41.00	17.30	10.00	0.00
13-week bill	Mon, 10/4/07	Tue, 10/9/07	Thu, 10/11/07	1/10/08			16.00	
26-week bill	Thu, 10/4/07	Tue, 10/9/07	Thu, 10/11/07	4/10/08			15.00	

School Closings

- ▶ 80% to 90% of K-12 schools, universities and colleges, and daycare facilities across the country are closed
- ▶ Most urban school systems have turned to the Internet and television in an attempt to maintain a basic education level for children at home



Electric, Gas, Telephone, and Internet Service

- ▶ Electric utilities have re-assigned personnel to ensure timely responses to 80% of emergency calls (electric, gas, and steam service)
 - Low priority maintenance work is deferred and work associated with the installation of new service facilities is delayed
- ▶ Due to rising absenteeism, telephone and internet service providers are cutting back on maintenance activities and are utilizing increased prioritization
 - Response times to initiate new service and fix problems have increased by 50%
 - Utilities are beginning to notice a change in daytime usage patterns as schools close down, parents take off from work, and more families are staying at home
- ▶ Areas where schools are closed are experiencing decreased network performance due to increased distance learning and recreational traffic loads



Postal, Overnight, Courier, and Armored Vehicle



- ▶ The U.S. Postal Service and private delivery services are suffering from increasing absenteeism and backlogs of mail are waiting to be processed, resulting in a delay of two days beyond normal delivery times being commonplace nationwide

Travel, Transportation, and Fuel

- ▶ In the United States, rising public concern is resulting in a 40% reduction in air and land travel to cities with increasing numbers of H5N1 cases
 - Airlines are reporting instances of flight crews that have called in sick rather than fly to affected cities
 - Local area transit authorities announce health screening processes at public transit hubs combined with an increased cleaning program



- ▶ Due to decreasing refinery production and reduced deliveries, consumers are experiencing higher prices and reduced supplies of gasoline

Facilities Security and Property Management



- ▶ Private security firms are affected by absenteeism and are not fully staffing facility security contracts
- ▶ Increasing absenteeism is beginning to result in sporadic delays in trash removal from commercial and residential areas
- ▶ Absenteeism among building management staff is resulting in a degraded capability to meet building safety standards
- ▶ Regular facility maintenance is being deferred

Social, Public, and Sporting Events and Activities

- ▶ Across the country, local governments are canceling events and encouraging others to do the same
- ▶ Restaurants, parks, and other public sites are seeing reduced numbers of visitors
- ▶ In the sports world, discussions have begun between teams, leagues, and local/State authorities on how and when to suspend operations
- ▶ Public safety concerns are rising
 - In some jurisdictions, authorities are expressing concern over potential public safety issues caused by an increase in absenteeism among law enforcement personnel
 - Crime rates, especially for robberies and burglaries, are reported to be increasing nationally

Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Scenario Materials and Market Status

▶ How to Participate in the Exercise	2-5
▶ Scenario Update 1.....	6-29
– Pandemic Update.....	7-12
– Healthcare Sector Update	13
– Antivirals, Personal Protective Equipment, and Vaccine.....	14
– Economic and Financial Market Update.....	15-23
– School Closings.....	24
– Electric, Gas, Telephone, and Internet Service.....	25
– Postal, Overnight, Courier, and Armored Vehicle.....	26
– Travel, Transportation, and Fuel.....	27
– Facilities Security and Property Management.....	28
– Social, Public, and Sporting Events and Activities.....	29
▶ Scenario Matrix.....	30-36
▶ Questionnaire.....	37-50
▶ Internal Discussion Questions.....	51-53
▶ Absenteeism Distribution for the Next Scenario Update.....	54-55

Absenteeism Distribution for Scenario Update 2

- ▶ The target absenteeism rate for Scenario Update 2 is 49%
- ▶ During the next scenario update, assume that all individuals from your organization with last names that begin with the following letters are absent and not available to work: **A, C, E, F, G, I, J, K, N, O, Q, R, S, U, V, X, and Z**
 - Given a normal distribution of last names across the alphabet, using these letters will achieve a 49% absenteeism rate
- ▶ Reasons for absence may include but are not limited to:
 - Taking care of dependents
 - Fear of infection
 - No access to transportation
 - Illness
 - Death