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Perspectives on Risks – Both Economic and Cyber

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One Area of Risk: Economic

- ▶ Heightened concerns over China and Europe
 - ▶ Volatile foreign and domestic markets
 - ▶ Federal funds rate futures fell significantly, reflecting market expectations for only a very gradual increase in short-term interest rates
 - ▶ My assessment – economy continuing to improve despite headwinds from abroad
 - ▶ May imply more increases in the federal funds rate than are currently priced into futures market
 - ▶ My outlook still calls for a *gradual* pace of increases
 - ▶ Path is uncertain and will depend on incoming economic data
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Another Area of Risk: Cyber

- ▶ Banks of all sizes are already taking significant steps to mitigate
 - ▶ Active, strategic investment in mitigation
 - ▶ Active supervision by examiners to insure effective controls
 - ▶ Like terrorism – need continued vigilance and continuous improvement of defenses
 - ▶ Bank robbery and fraud were localized problems
 - ▶ Cyber attacks can originate from anywhere in the world
 - ▷ Global population of attackers
 - ▷ Seek opportunities (softer targets) without geographic preference
 - ▶ Today's conference will discuss continued mitigation
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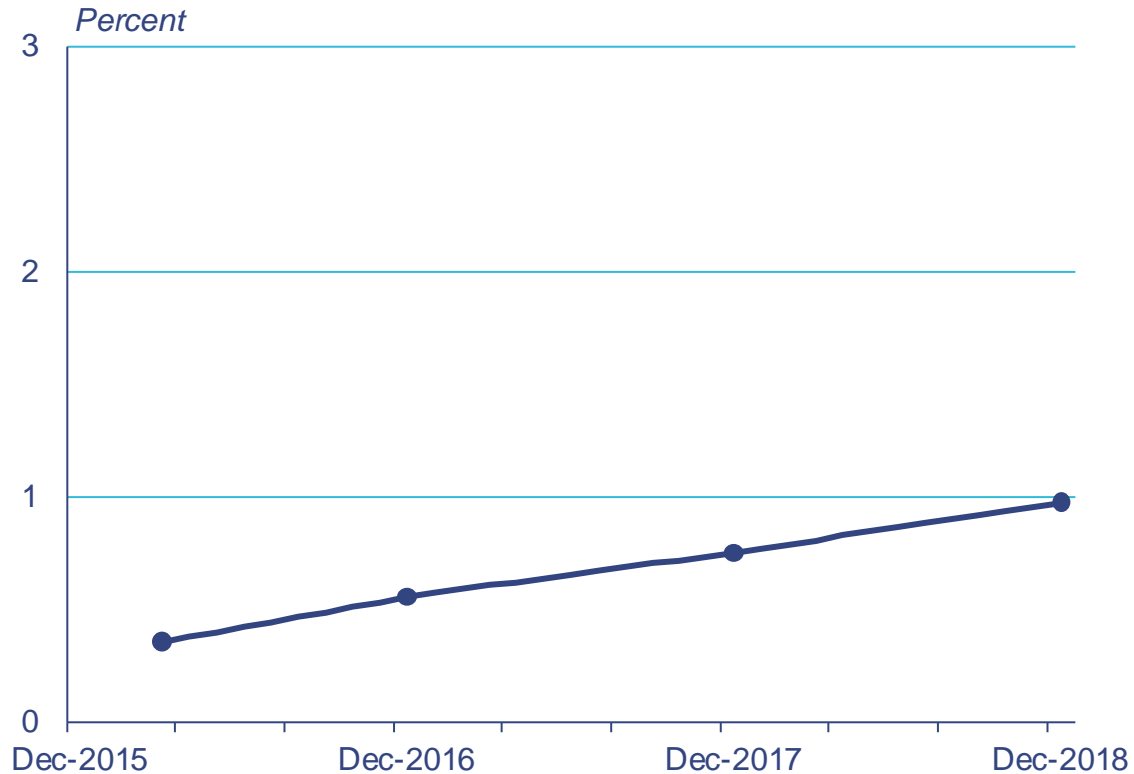
> The Economy

- ▶ Domestic economy continues to improve
 - ▶ Payroll employment grew by 215,000 jobs
 - ▶ Some measures of wages and prices are trending up
 - ▶ Global headwinds
 - ▶ Trading partners continue to face challenges
 - ▶ Several foreign central banks have eased
 - ▶ Some financial markets have been volatile
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Figure 1: Federal Funds Rate Projections Implied by the Federal Funds Futures Market on April 1, 2016

March 2016 - December 2018



Note: The March 2016 rate is the actual March 2016 federal funds effective rate.

Source: Bloomberg



Figure 2: Probability of Rate Increases At or Before the December 2016 FOMC Meeting Implied by the Federal Funds Futures Market on April 1, 2016

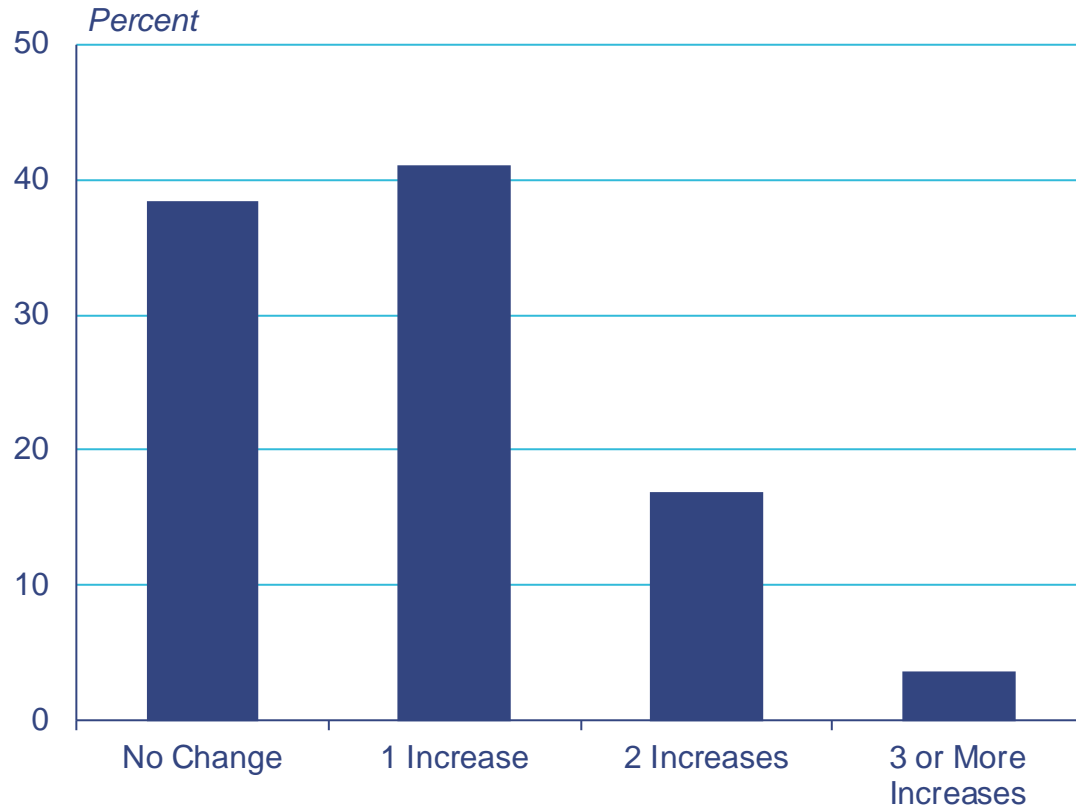




Figure 3: Probability of Rate Increases At or Before the December 2016 FOMC Meeting Implied by the Federal Funds Futures Market

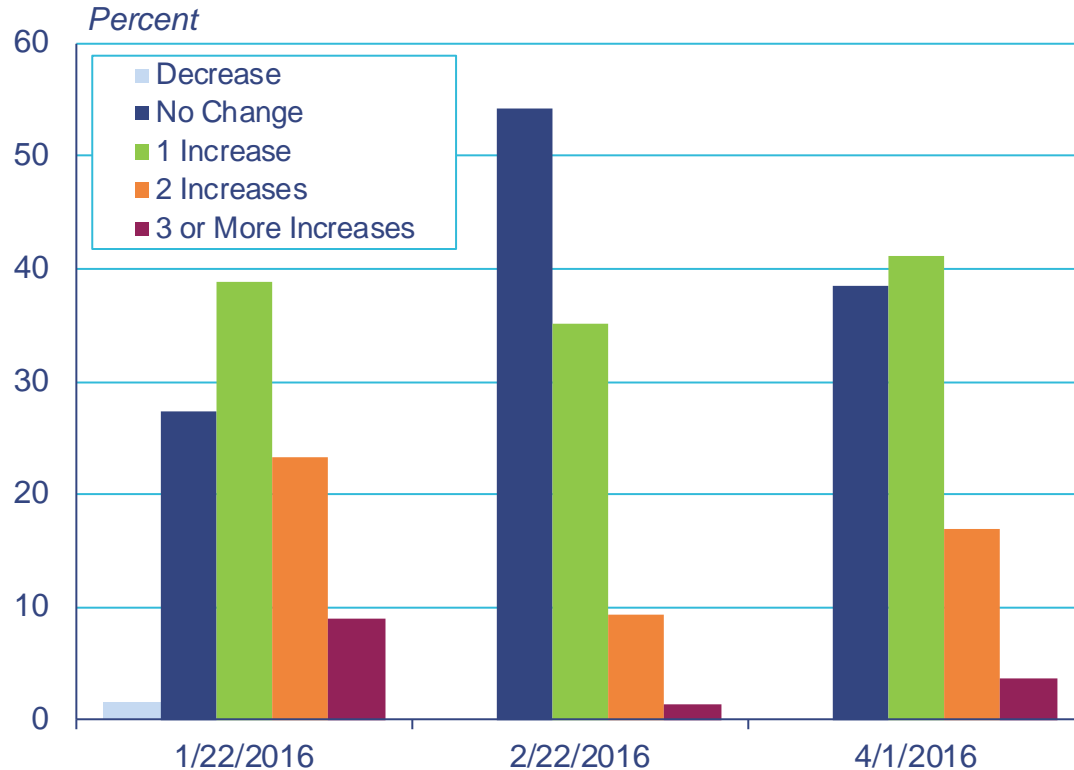




Figure 4: Global Stock Market Indices
December 16, 2015 - April 1, 2016

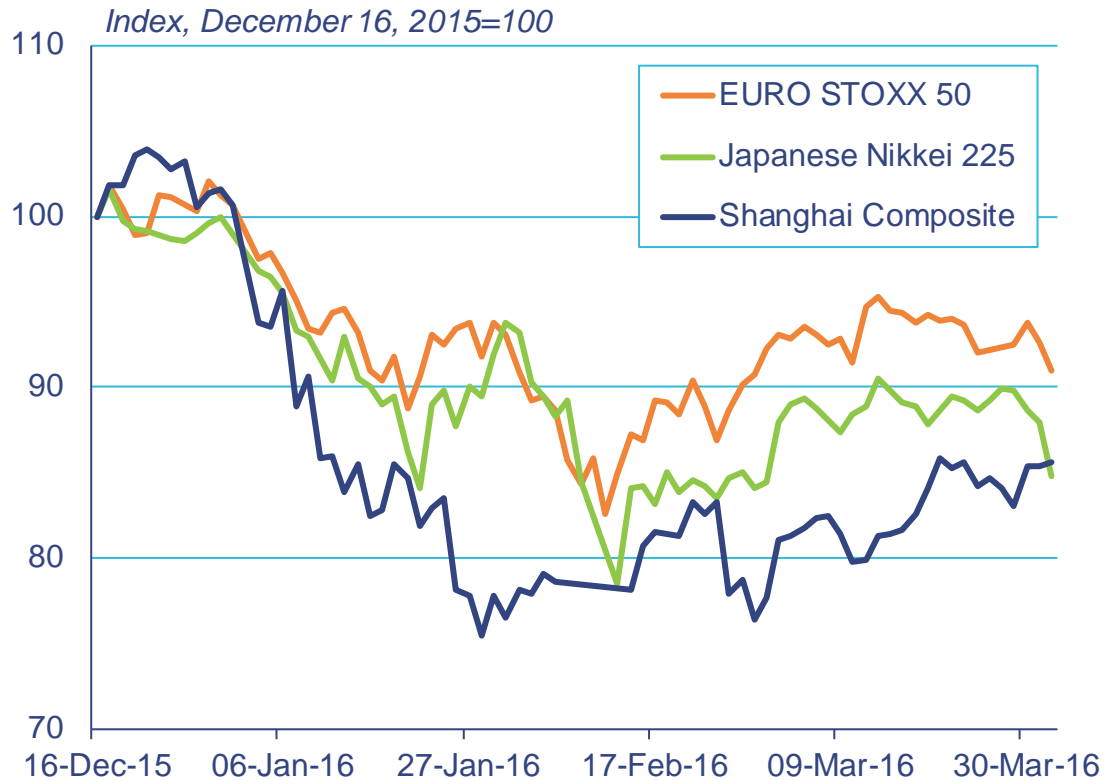




Figure 5: U.S. Stock Market Indices
December 16, 2015 - April 1, 2016

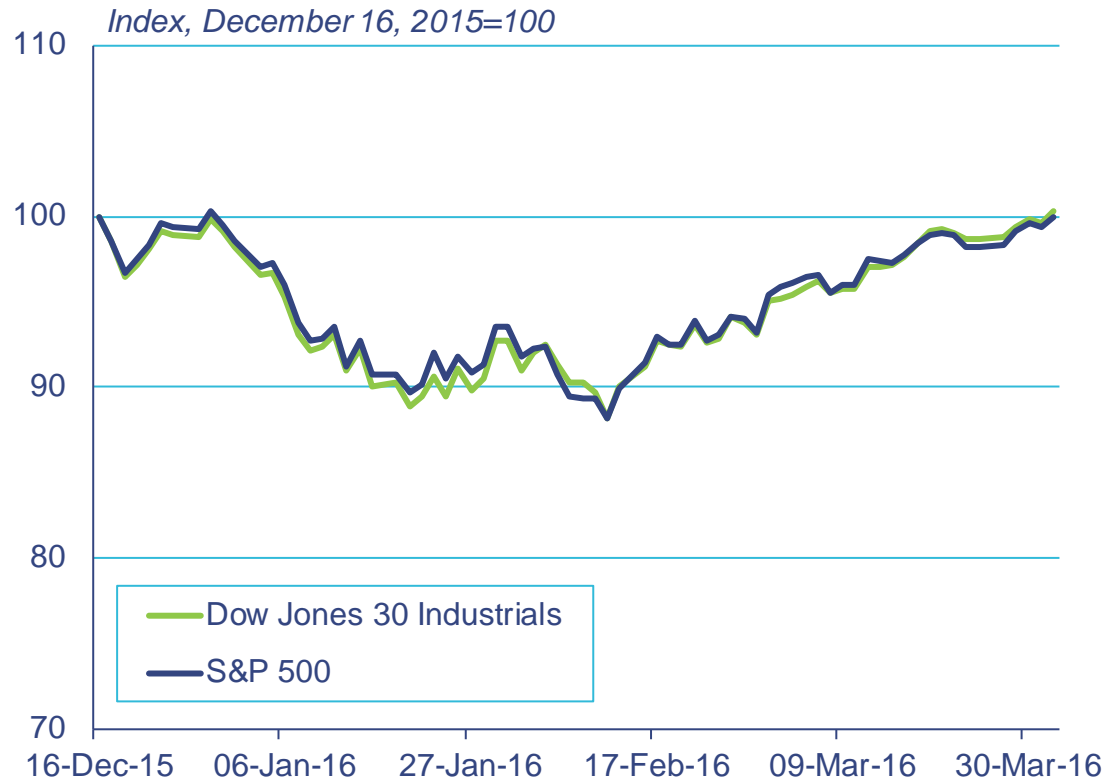




Figure 6: CBOE Market Volatility Index: VIX
December 16, 2015 - April 1, 2016





Figure 7: Nominal Broad Trade-Weighted Exchange Value of the U.S. Dollar

December 16, 2015 - April 1, 2016

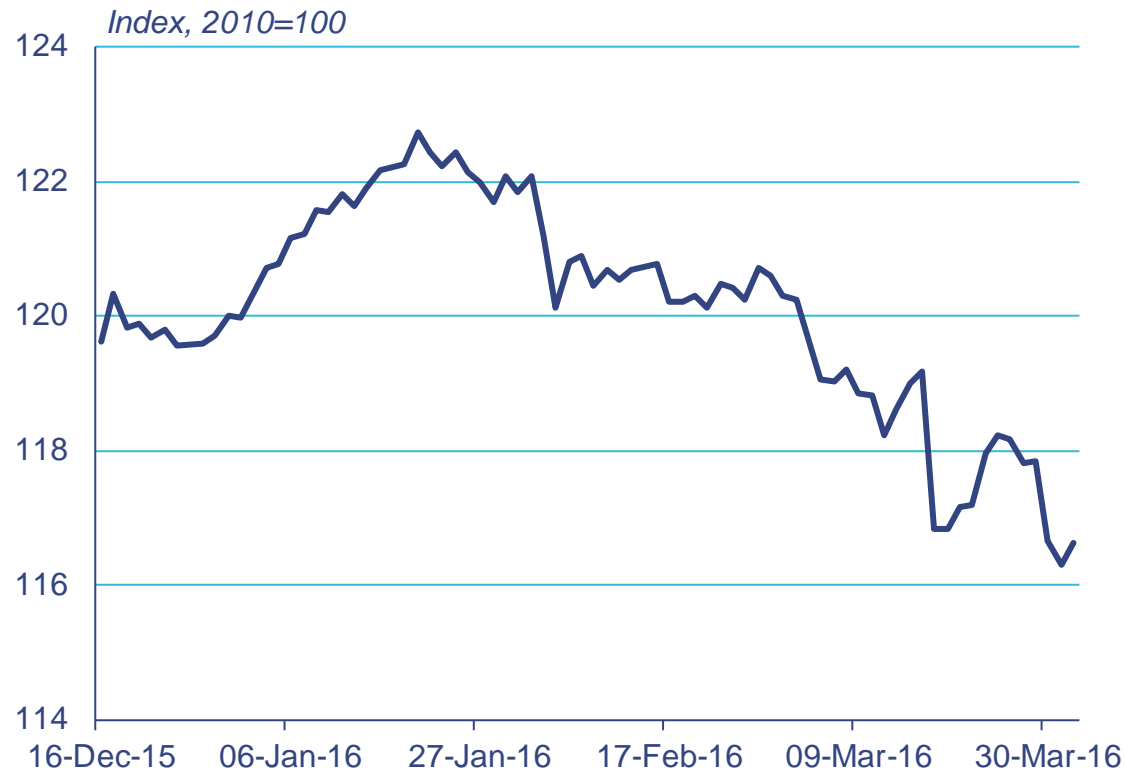
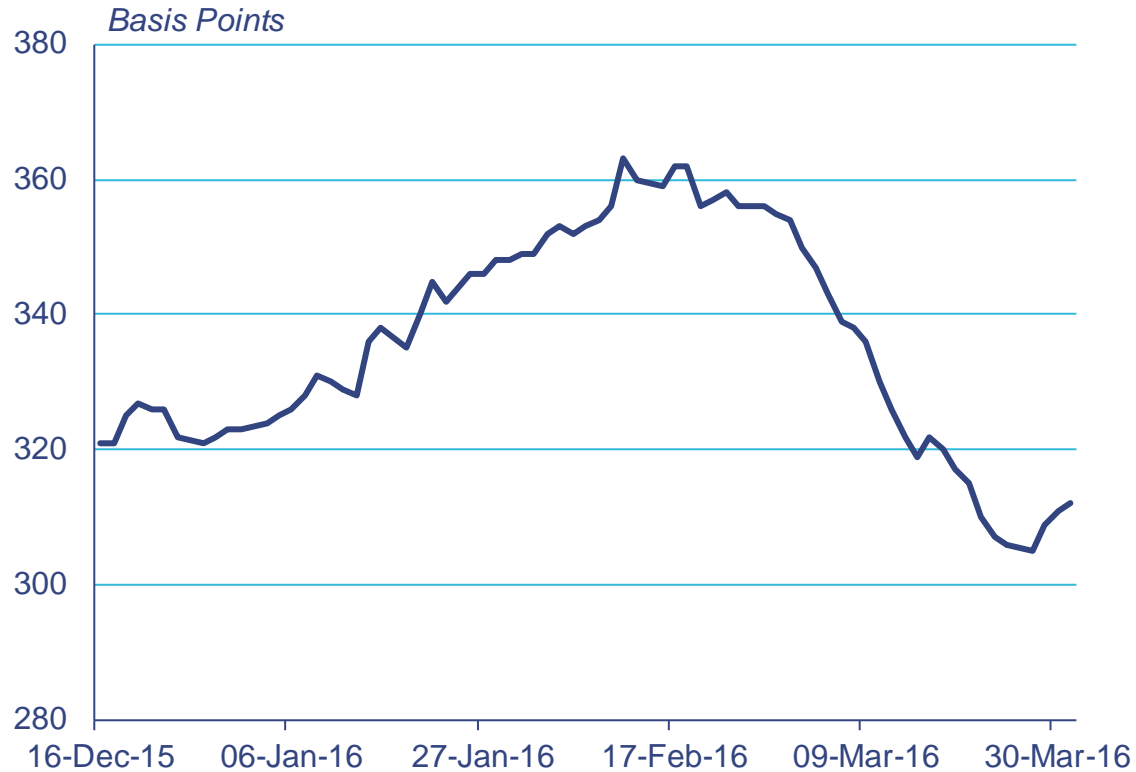




Figure 8: Spread of Moody's Seasoned Baa Corporate Bond Yield Over Ten-Year Treasury Yield
December 16, 2015 - March 31, 2016



Note: Based on corporate bonds with remaining maturities of at least 20 years.

Source: Federal Reserve Board, Haver Analytics

Figure 9: Unemployment Rate Projections of Federal Reserve Governors and Federal Reserve Bank Presidents, March 16, 2016

2016:Q4 - 2018:Q4

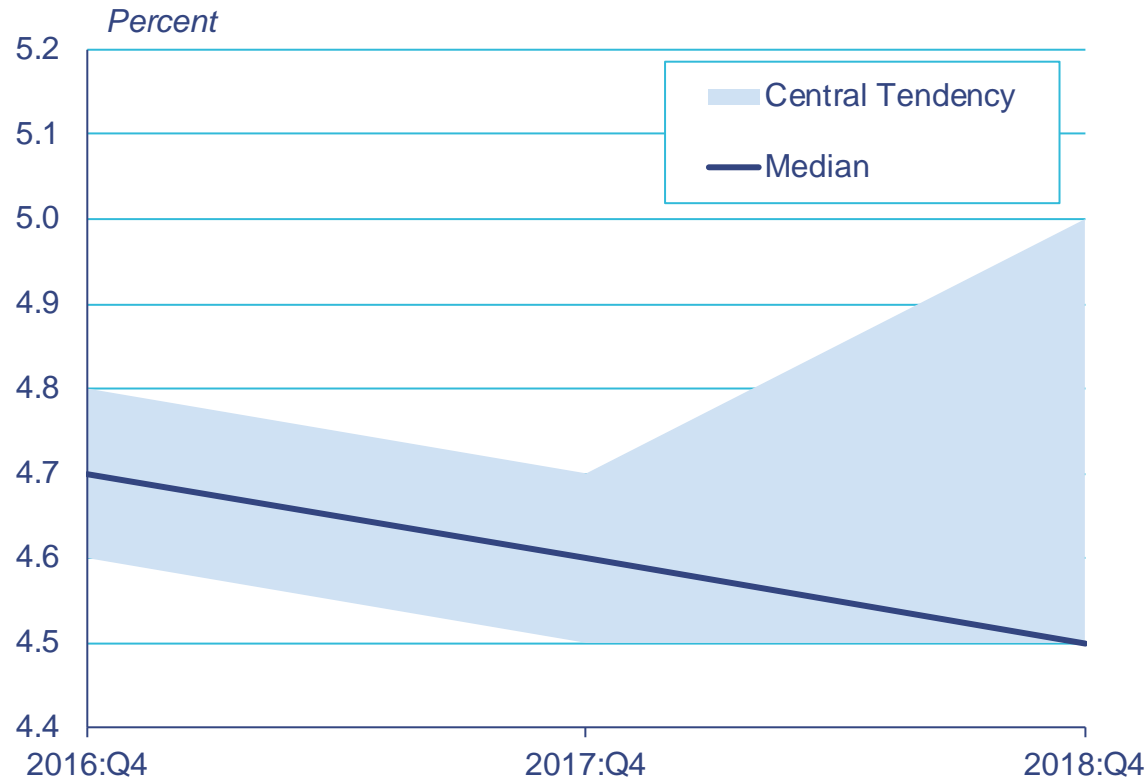


Figure 10: Core Inflation Rate Projections of Federal Reserve Governors and Federal Reserve Bank Presidents, March 16, 2016

2016:Q4 - 2018:Q4

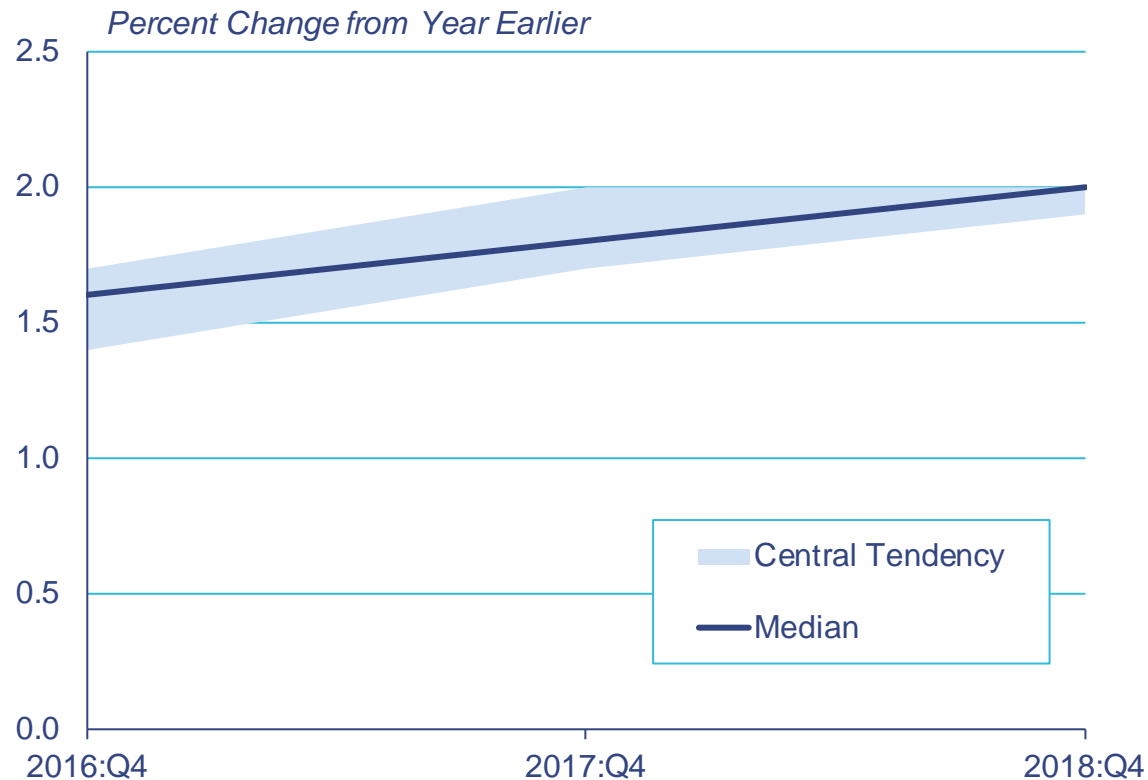
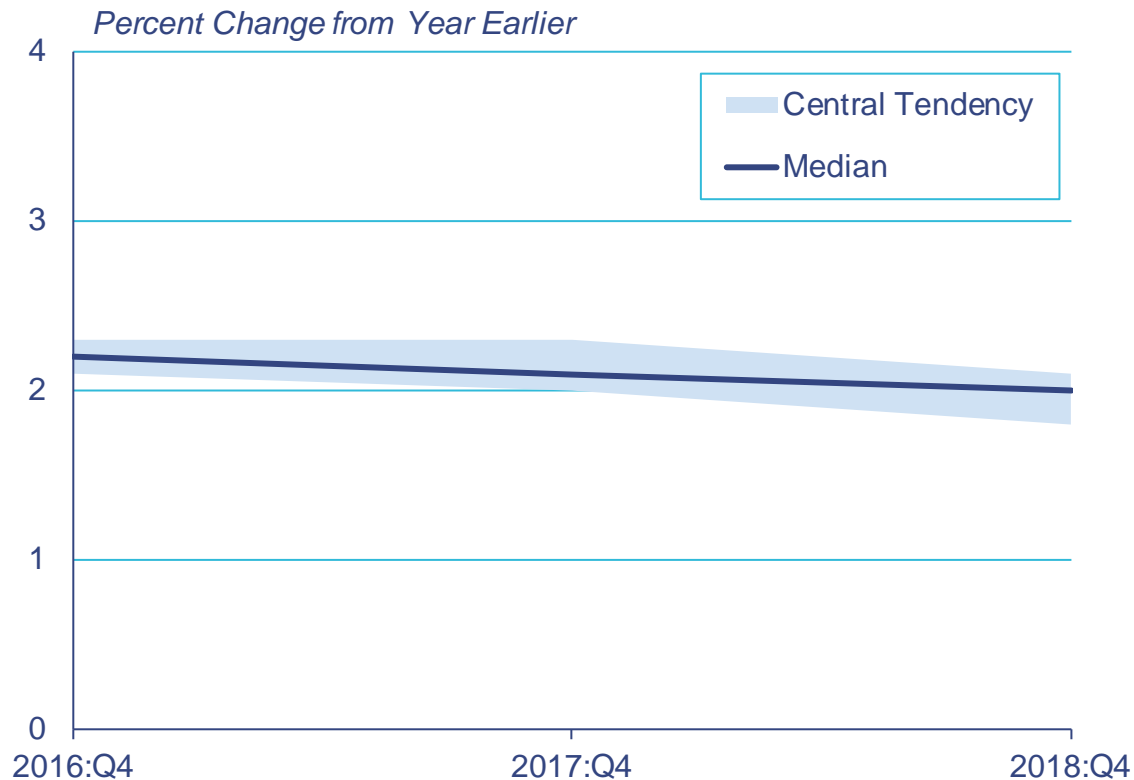


Figure 11: Real GDP Growth Projections of Federal Reserve Governors and Federal Reserve Bank Presidents, March 16, 2016

2016:Q4 - 2018:Q4





My Perspective on the Path of Monetary Policy

- ▶ Financial market volatility has subsided
 - ▶ Most economic forecasts do not expect large spillovers to the domestic economy
 - ▶ While problems could still arise, I would expect that the very slow removal of accommodation reflected in futures market pricing could prove too pessimistic
 - ▶ If as I expect the incoming data continue to show a moderate recovery it will likely be appropriate to resume the path of gradual tightening sooner than is implied by financial-market futures
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Cyber Risk, However, is not Abating

- ▶ Financial institutions invest heavily in technology, and in keeping that technology safe
 - ▶ Competition from “fintech” – appeals to customers looking for convenience
 - ▶ Not burdened by brick and mortar
 - ▶ Not regulated
 - ▶ But may not be as focused on cybersecurity or economic downturns as banks
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As Banks Innovate to Meet Competition, There Are New Risks

- ▶ Knowing customers through the branch network is much less prevalent
 - ▶ Cyber crime can originate from anywhere there is a computer link
 - ▶ Hard to find – particularly with large volume of transactions
 - ▶ Large-scale attacks can occur suddenly
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Mitigation is Critical

- ▶ Banks invest significant resources in personnel and software remaining up to date
 - ▶ Important to share information and strategies – a topic for discussion today
 - ▶ Having protocols ready, should a breach occur, is also important
 - ▶ Resiliency; quick recovery of operations
 - ▶ Plan for communication with stakeholders and regulators
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Concluding Observations

- ▶ Some of the economic concerns from earlier this year seem to be receding
 - ▶ Financial market expectations of a very slow removal of accommodation could, it seems to me, prove unduly pessimistic
 - ▶ I expect a stronger economy which will lead to more tightening than is currently priced into futures market expectations over the next two years
 - ▶ Cyber risks are not abating
 - ▶ Banking organizations (and central banks) need to evolve with these risks and challenges
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