CFA Level II - LOS Changes 2018 - 2019

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Ethics	1.1.a	describe the six components of the Code of Ethics and the seven Standards of Professional Conduct	1.1.a	describe the six components of the Code of Ethics and the seven Standards of Professional Conduct	
Ethics	1.1.b	explain the ethical responsibilities required of CFA Institute members and candidates in the CFA Program by the Code and Standards	1.1.b	explain the ethical responsibilities required of CFA Institute members and candidates in the CFA Program by the Code and Standards	
Ethics	1.2.a	demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations	1.2.a	demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations	**Wording Change**
Ethics	1.2.b	recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct	1.2.b	recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct	
Ethics	1.3.a	explain the objectives of the Research Objectivity Standards			**Removed**
Ethics	1.3.b	evaluate company policies and practices related to research objectivity, and distinguish between changes required and changes recommended for compliance with the Research Objectivity Standards			**Removed**
Ethics	2.4.a	evaluate the practices and policies presented			**Removed**

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Ethics			2.3.a	evaluate policies and practices for a firm and an individual in relation to the CFA Institute Code of Ethics and Standards of Professional Conduct	**New**
Ethics	2.4.b	explain the appropriate action to take in response to conduct that violates the CFA Institute Code of Ethics and Standards of Professional Conduct	2.3.b	explain the appropriate action to take in response to conduct that violates the CFA Institute Code of Ethics and Standards of Professional Conduct	
Ethics	2.5.a	evaluate the practices and policies presented			**Removed**
Ethics	2.5.b	explain the appropriate action to take in response to conduct that violates the CFA Institute Code of Ethics and Standards of Professional Conduct			**Removed**
Ethics	2.6.a	evaluate the practices and policies presented			**Removed**
Ethics	2.6.b	explain the appropriate action to take in response to conduct that violates the CFA Institute Code of Ethics and Standards of Professional Conduct			**Removed**
Ethics	2.7.a	evaluate trade allocation practices and determine whether they comply with the CFA Institute Standards of Professional Conduct addressing fair dealing and client loyalty	2.4.a	evaluate trade allocation practices and determine whether they comply with the CFA Institute Standards of Professional Conduct addressing fair dealing and client loyalty	
Ethics	2.7.b	describe appropriate actions to take in response to trade allocation practices that do not adequately respect client interests	2.4.b	describe appropriate actions to take in response to trade allocation practices that do not adequately respect client interests	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Ethics	2.8.a	evaluate the disclosure of investment objectives and basic policies and determine whether they comply with the CFA Institute Standards of Professional Conduct	2.5.a	evaluate the disclosure of investment objectives and basic policies and determine whether they comply with the CFA Institute Standards of Professional Conduct	
Ethics	2.8.b	describe appropriate actions needed to ensure adequate disclosure of the investment process	2.5.b	describe appropriate actions needed to ensure adequate disclosure of the investment process	
Quantitative Methods			3.6.a	describe “fintech”	**New**
Quantitative Methods			3.6.b	describe Big Data, artificial intelligence, and machine learning	**New**
Quantitative Methods			3.6.c	describe fintech applications to investment management	**New**
Quantitative Methods			3.6.d	describe financial applications of distributed ledger technology	**New**
Quantitative Methods	3.9.a	calculate and interpret a sample covariance and a sample correlation coefficient and interpret a scatter plot	3.7.a	calculate and interpret a sample covariance and a sample correlation coefficient and interpret a scatter plot	
Quantitative Methods	3.9.b	describe limitations to correlation analysis	3.7.b	describe limitations to correlation analysis	
Quantitative Methods	3.9.c	formulate a test of the hypothesis that the population correlation coefficient equals zero and determine whether the hypothesis is rejected at a given level of significance	3.7.c	formulate a test of the hypothesis that the population correlation coefficient equals zero and determine whether the hypothesis is rejected at a given level of significance	
Quantitative Methods	3.9.d	distinguish between the dependent and independent variables in a linear regression	3.7.d	distinguish between the dependent and independent variables in a linear regression	
Quantitative Methods	3.9.e	explain the assumptions underlying linear regression and interpret regression coefficients	3.7.e	explain the assumptions underlying linear regression and interpret regression coefficients	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.9.f	calculate and interpret the standard error of estimate, the coefficient of determination, and a confidence interval for a regression coefficient	3.7.f	calculate and interpret the standard error of estimate, the coefficient of determination, and a confidence interval for a regression coefficient	
Quantitative Methods	3.9.g	formulate a null and alternative hypothesis about a population value of a regression coefficient and determine the appropriate test statistic and whether the null hypothesis is rejected at a given level of significance	3.7.g	formulate a null and alternative hypothesis about a population value of a regression coefficient and determine the appropriate test statistic and whether the null hypothesis is rejected at a given level of significance	
Quantitative Methods	3.9.h	calculate the predicted value for the dependent variable, given an estimated regression model and a value for the independent variable	3.7.h	calculate the predicted value for the dependent variable, given an estimated regression model and a value for the independent variable	
Quantitative Methods	3.9.i	calculate and interpret a confidence interval for the predicted value of the dependent variable	3.7.i	calculate and interpret a confidence interval for the predicted value of the dependent variable	
Quantitative Methods	3.9.j	describe the use of analysis of variance (ANOVA) in regression analysis, interpret ANOVA results, and calculate and interpret the F-statistic	3.7.j	describe the use of analysis of variance (ANOVA) in regression analysis, interpret ANOVA results, and calculate and interpret the F-statistic	
Quantitative Methods	3.9.k	describe limitations of regression analysis	3.7.k	describe limitations of regression analysis	
Quantitative Methods	3.10.a	formulate a multiple regression equation to describe the relation between a dependent variable and several independent variables and determine the statistical significance of each independent variable	3.8.a	formulate a multiple regression equation to describe the relation between a dependent variable and several independent variables and determine the statistical significance of each independent variable	
Quantitative Methods	3.10.b	interpret estimated regression coefficients and their p-values	3.8.b	interpret estimated regression coefficients and their p-values	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.10.c	formulate a null and an alternative hypothesis about the population value of a regression coefficient, calculate the value of the test statistic, and determine whether to reject the null hypothesis at a given level of significance	3.8.c	formulate a null and an alternative hypothesis about the population value of a regression coefficient, calculate the value of the test statistic, and determine whether to reject the null hypothesis at a given level of significance	
Quantitative Methods	3.10.d	interpret the results of hypothesis tests of regression coefficients	3.8.d	interpret the results of hypothesis tests of regression coefficients	
Quantitative Methods	3.10.e	calculate and interpret 1) a confidence interval for the population value of a regression coefficient and 2) a predicted value for the dependent variable, given an estimated regression model and assumed values for the independent variables	3.8.e	calculate and interpret 1) a confidence interval for the population value of a regression coefficient and 2) a predicted value for the dependent variable, given an estimated regression model and assumed values for the independent variables	**Wording Change**
Quantitative Methods	3.10.f	explain the assumptions of a multiple regression model	3.8.f	explain the assumptions of a multiple regression model	
Quantitative Methods	3.10.g	calculate and interpret the F-statistic, and describe how it is used in regression analysis	3.8.g	calculate and interpret the F-statistic, and describe how it is used in regression analysis	
Quantitative Methods	3.10.h	distinguish between and interpret the R2 and adjusted R2 in multiple regression	3.8.h	distinguish between and interpret the R2 and adjusted R2 in multiple regression	
Quantitative Methods	3.10.i	evaluate how well a regression model explains the dependent variable by analyzing the output of the regression equation and an ANOVA table	3.8.i	evaluate how well a regression model explains the dependent variable by analyzing the output of the regression equation and an ANOVA table	
Quantitative Methods	3.10.j	formulate a multiple regression equation by using dummy variables to represent qualitative factors and interpret the coefficients and regression results	3.8.j	formulate a multiple regression equation by using dummy variables to represent qualitative factors and interpret the coefficients and regression results	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.10.k	explain the types of heteroskedasticity and how heteroskedasticity and serial correlation affect statistical inference	3.8.k	explain the types of heteroskedasticity and how heteroskedasticity and serial correlation affect statistical inference	
Quantitative Methods	3.10.l	describe multicollinearity and explain its causes and effects in regression analysis	3.8.l	describe multicollinearity and explain its causes and effects in regression analysis	
Quantitative Methods	3.10.m	describe how model misspecification affects the results of a regression analysis and describe how to avoid common forms of misspecification	3.8.m	describe how model misspecification affects the results of a regression analysis and describe how to avoid common forms of misspecification	
Quantitative Methods	3.10.n	describe models with qualitative dependent variables	3.8.n	describe models with qualitative dependent variables	
Quantitative Methods	3.10.o	evaluate and interpret a multiple regression model and its results	3.8.o	evaluate and interpret a multiple regression model and its results	
Quantitative Methods			3.8.p	distinguish between supervised and unsupervised machine learning	**New**
Quantitative Methods			3.8.q	describe machine learning algorithms used in prediction, classification, clustering, and dimension reduction	**New**
Quantitative Methods			3.8.r	describe the steps in model training	**New**
Quantitative Methods	3.11.a	calculate and evaluate the predicted trend value for a time series, modeled as either a linear trend or a log-linear trend, given the estimated trend coefficients	3.9.a	calculate and evaluate the predicted trend value for a time series, modeled as either a linear trend or a log-linear trend, given the estimated trend coefficients	
Quantitative Methods	3.11.b	describe factors that determine whether a linear or a log-linear trend should be used with a particular time series and evaluate limitations of trend models	3.9.b	describe factors that determine whether a linear or a log-linear trend should be used with a particular time series and evaluate limitations of trend models	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.11.c	explain the requirement for a time series to be covariance stationary and describe the significance of a series that is not stationary	3.9.c	explain the requirement for a time series to be covariance stationary and describe the significance of a series that is not stationary	
Quantitative Methods	3.11.d	describe the structure of an autoregressive (AR) model of order p and calculate one- and two-period-ahead forecasts given the estimated coefficients	3.9.d	describe the structure of an autoregressive (AR) model of order p and calculate one- and two-period-ahead forecasts given the estimated coefficients	
Quantitative Methods	3.11.e	explain how autocorrelations of the residuals can be used to test whether the autoregressive model fits the time series	3.9.e	explain how autocorrelations of the residuals can be used to test whether the autoregressive model fits the time series	
Quantitative Methods	3.11.f	explain mean reversion and calculate a mean-reverting level	3.9.f	explain mean reversion and calculate a mean-reverting level	
Quantitative Methods	3.11.g	contrast in-sample and out-of-sample forecasts and compare the forecasting accuracy of different time-series models based on the root mean squared error criterion	3.9.g	contrast in-sample and out-of-sample forecasts and compare the forecasting accuracy of different time-series models based on the root mean squared error criterion	
Quantitative Methods	3.11.h	explain the instability of coefficients of time-series models	3.9.h	explain the instability of coefficients of time-series models	
Quantitative Methods	3.11.i	describe characteristics of random walk processes and contrast them to covariance stationary processes	3.9.i	describe characteristics of random walk processes and contrast them to covariance stationary processes	
Quantitative Methods	3.11.j	describe implications of unit roots for time-series analysis, explain when unit roots are likely to occur and how to test for them, and demonstrate how a time series with a unit root can be transformed so it can be analyzed with an AR model	3.9.j	describe implications of unit roots for time-series analysis, explain when unit roots are likely to occur and how to test for them, and demonstrate how a time series with a unit root can be transformed so it can be analyzed with an AR model	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.11.k	describe the steps of the unit root test for nonstationarity and explain the relation of the test to autoregressive time-series models	3.9.k	describe the steps of the unit root test for nonstationarity and explain the relation of the test to autoregressive time-series models	
Quantitative Methods	3.11.l	explain how to test and correct for seasonality in a time-series model and calculate and interpret a forecasted value using an AR model with a seasonal lag	3.9.l	explain how to test and correct for seasonality in a time-series model and calculate and interpret a forecasted value using an AR model with a seasonal lag	
Quantitative Methods	3.11.m	explain autoregressive conditional heteroskedasticity (ARCH) and describe how ARCH models can be applied to predict the variance of a time series	3.9.m	explain autoregressive conditional heteroskedasticity (ARCH) and describe how ARCH models can be applied to predict the variance of a time series	
Quantitative Methods	3.11.n	explain how time-series variables should be analyzed for nonstationarity and/or cointegration before use in a linear regression	3.9.n	explain how time-series variables should be analyzed for nonstationarity and/or cointegration before use in a linear regression	
Quantitative Methods	3.11.o	determine an appropriate time-series model to analyze a given investment problem and justify that choice	3.9.o	determine an appropriate time-series model to analyze a given investment problem and justify that choice	
Quantitative Methods	3.12.a	describe steps in running a simulation	3.10.a	describe steps in running a simulation	
Quantitative Methods	3.12.b	explain three ways to define the probability distributions for a simulation’s variables	3.10.b	explain three ways to define the probability distributions for a simulation’s variables	
Quantitative Methods	3.12.c	describe how to treat correlation across variables in a simulation	3.10.c	describe how to treat correlation across variables in a simulation	
Quantitative Methods	3.12.d	describe advantages of using simulations in decision making	3.10.d	describe advantages of using simulations in decision making	
Quantitative Methods	3.12.e	describe some common constraints introduced into simulations	3.10.e	describe some common constraints introduced into simulations	
Quantitative Methods	3.12.f	describe issues in using simulations in risk assessment	3.10.f	describe issues in using simulations in risk assessment	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Quantitative Methods	3.12.g	compare scenario analysis, decision trees, and simulations	3.10.g	compare scenario analysis, decision trees, and simulations	
Economics	4.13.a	calculate and interpret the bid–offer spread on a spot or forward currency quotation and describe the factors that affect the bid–offer spread	4.11.a	calculate and interpret the bid–offer spread on a spot or forward currency quotation and describe the factors that affect the bid–offer spread	
Economics	4.13.b	identify a triangular arbitrage opportunity and calculate its profit, given the bid–offer quotations for three currencies	4.11.b	identify a triangular arbitrage opportunity and calculate its profit, given the bid–offer quotations for three currencies	
Economics	4.13.c	distinguish between spot and forward rates and calculate the forward premium/discount for a given currency	4.11.c	distinguish between spot and forward rates and calculate the forward premium/discount for a given currency	
Economics	4.13.d	calculate the mark-to-market value of a forward contract	4.11.d	calculate the mark-to-market value of a forward contract	
Economics	4.13.e	explain international parity conditions (covered and uncovered interest rate parity, forward rate parity, purchasing power parity, and the international Fisher effect)	4.11.e	explain international parity conditions (covered and uncovered interest rate parity, forward rate parity, purchasing power parity, and the international Fisher effect)	
Economics	4.13.f	describe relations among the international parity conditions	4.11.f	describe relations among the international parity conditions	
Economics	4.13.g	evaluate the use of the current spot rate, the forward rate, purchasing power parity, and uncovered interest parity to forecast future spot exchange rates	4.11.g	evaluate the use of the current spot rate, the forward rate, purchasing power parity, and uncovered interest parity to forecast future spot exchange rates	
Economics	4.13.h	explain approaches to assessing the long-run fair value of an exchange rate	4.11.h	explain approaches to assessing the long-run fair value of an exchange rate	
Economics	4.13.i	describe the carry trade and its relation to uncovered interest rate parity and calculate the profit from a carry trade	4.11.i	describe the carry trade and its relation to uncovered interest rate parity and calculate the profit from a carry trade	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Economics	4.13.j	explain how flows in the balance of payment accounts affect currency exchange rates	4.11.j	explain how flows in the balance of payment accounts affect currency exchange rates	
Economics	4.13.k	explain the potential effects of monetary and fiscal policy on exchange rates	4.11.k	explain the potential effects of monetary and fiscal policy on exchange rates	
Economics	4.13.l	describe objectives of central bank or government intervention and capital controls and describe the effectiveness of intervention and capital controls	4.11.l	describe objectives of central bank or government intervention and capital controls and describe the effectiveness of intervention and capital controls	
Economics	4.13.m	describe warning signs of a currency crisis	4.11.m	describe warning signs of a currency crisis	
Economics	4.14.a	compare factors favoring and limiting economic growth in developed and developing economies	4.12.a	compare factors favoring and limiting economic growth in developed and developing economies	
Economics	4.14.b	describe the relation between the long-run rate of stock market appreciation and the sustainable growth rate of the economy	4.12.b	describe the relation between the long-run rate of stock market appreciation and the sustainable growth rate of the economy	
Economics	4.14.c	explain why potential GDP and its growth rate matter for equity and fixed income investors	4.12.c	explain why potential GDP and its growth rate matter for equity and fixed income investors	
Economics	4.14.d	distinguish between capital deepening investment and technological progress and explain how each affects economic growth and labor productivity	4.12.d	distinguish between capital deepening investment and technological progress and explain how each affects economic growth and labor productivity	
Economics	4.14.e	forecast potential GDP based on growth accounting relations	4.12.e	forecast potential GDP based on growth accounting relations	
Economics	4.14.f	explain how natural resources affect economic growth and evaluate the argument that limited availability of natural resources constrains economic growth	4.12.f	explain how natural resources affect economic growth and evaluate the argument that limited availability of natural resources constrains economic growth	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Economics	4.14.g	explain how demographics, immigration, and labor force participation affect the rate and sustainability of economic growth	4.12.g	explain how demographics, immigration, and labor force participation affect the rate and sustainability of economic growth	
Economics	4.14.h	explain how investment in physical capital, human capital, and technological development affects economic growth	4.12.h	explain how investment in physical capital, human capital, and technological development affects economic growth	
Economics	4.14.i	compare classical growth theory, neoclassical growth theory, and endogenous growth theory	4.12.i	compare classical growth theory, neoclassical growth theory, and endogenous growth theory	
Economics	4.14.j	explain and evaluate convergence hypotheses	4.12.j	explain and evaluate convergence hypotheses	
Economics	4.14.k	describe the economic rationale for governments to provide incentives to private investment in technology and knowledge	4.12.k	describe the economic rationale for governments to provide incentives to private investment in technology and knowledge	
Economics	4.14.l	describe the expected impact of removing trade barriers on capital investment and profits, employment and wages, and growth in the economies involved	4.12.l	describe the expected impact of removing trade barriers on capital investment and profits, employment and wages, and growth in the economies involved	
Economics	4.15.a	describe classifications of regulations and regulators	4.13.a	describe classifications of regulations and regulators	
Economics	4.15.b	describe uses of self-regulation in financial markets	4.13.b	describe uses of self-regulation in financial markets	
Economics	4.15.c	describe the economic rationale for regulatory intervention	4.13.c	describe the economic rationale for regulatory intervention	
Economics	4.15.d	describe regulatory interdependencies and their effects	4.13.d	describe regulatory interdependencies and their effects	
Economics	4.15.e	describe tools of regulatory intervention in markets	4.13.e	describe tools of regulatory intervention in markets	
Economics	4.15.f	explain purposes in regulating commerce and financial markets	4.13.f	explain purposes in regulating commerce and financial markets	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Economics	4.15.g	describe anticompetitive behaviors targeted by antitrust laws globally and evaluate the antitrust risk associated with a given business strategy	4.13.g	describe anticompetitive behaviors targeted by antitrust laws globally and evaluate the antitrust risk associated with a given business strategy	
Economics	4.15.h	describe benefits and costs of regulation	4.13.h	describe benefits and costs of regulation	
Economics	4.15.i	evaluate how a specific regulation affects an industry, company, or security	4.13.i	evaluate how a specific regulation affects an industry, company, or security	
Financial Reporting	5.16.a	describe the classification, measurement, and disclosure under International Financial Reporting Standards (IFRS) for 1) investments in financial assets, 2) investments in associates, 3) joint ventures, 4) business combinations, and 5) special purpose and variable interest entities	5.14.a	describe the classification, measurement, and disclosure under International Financial Reporting Standards (IFRS) for 1) investments in financial assets, 2) investments in associates, 3) joint ventures, 4) business combinations, and 5) special purpose and variable interest entities	
Financial Reporting	5.16.b	distinguish between IFRS and US GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities	5.14.b	distinguish between IFRS and US GAAP in the classification, measurement, and disclosure of investments in financial assets, investments in associates, joint ventures, business combinations, and special purpose and variable interest entities	
Financial Reporting	5.16.c	analyze how different methods used to account for intercorporate investments affect financial statements and ratios	5.14.c	analyze how different methods used to account for intercorporate investments affect financial statements and ratios	
Financial Reporting	5.17.a	describe the types of post-employment benefit plans and implications for financial reports	5.15.a	describe the types of post-employment benefit plans and implications for financial reports	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Financial Reporting	5.17.b	explain and calculate measures of a defined benefit pension obligation (i.e., present value of the defined benefit obligation and projected benefit obligation) and net pension liability (or asset)	5.15.b	explain and calculate measures of a defined benefit pension obligation (i.e., present value of the defined benefit obligation and projected benefit obligation) and net pension liability (or asset)	
Financial Reporting	5.17.c	describe the components of a company's defined benefit pension costs	5.15.c	describe the components of a company's defined benefit pension costs	
Financial Reporting	5.17.d	explain and calculate the effect of a defined benefit plan's assumptions on the defined benefit obligation and periodic pension cost	5.15.d	explain and calculate the effect of a defined benefit plan's assumptions on the defined benefit obligation and periodic pension cost	
Financial Reporting	5.17.e	explain and calculate how adjusting for items of pension and other post-employment benefits that are reported in the notes to the financial statements affects financial statements and ratios	5.15.e	explain and calculate how adjusting for items of pension and other post-employment benefits that are reported in the notes to the financial statements affects financial statements and ratios	
Financial Reporting	5.17.f	interpret pension plan note disclosures including cash flow related information	5.15.f	interpret pension plan note disclosures including cash flow related information	
Financial Reporting	5.17.g	explain issues associated with accounting for share-based compensation	5.15.g	explain issues associated with accounting for share-based compensation	
Financial Reporting	5.17.h	explain how accounting for stock grants and stock options affects financial statements, and the importance of companies' assumptions in valuing these grants and options	5.15.h	explain how accounting for stock grants and stock options affects financial statements, and the importance of companies' assumptions in valuing these grants and options	
Financial Reporting	5.18.a	distinguish among presentation (reporting) currency, functional currency, and local currency	5.16.a	distinguish among presentation (reporting) currency, functional currency, and local currency	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Financial Reporting	5.18.b	describe foreign currency transaction exposure, including accounting for and disclosures about foreign currency transaction gains and losses	5.16.b	describe foreign currency transaction exposure, including accounting for and disclosures about foreign currency transaction gains and losses	
Financial Reporting	5.18.c	analyze how changes in exchange rates affect the translated sales of the subsidiary and parent company	5.16.c	analyze how changes in exchange rates affect the translated sales of the subsidiary and parent company	
Financial Reporting	5.18.d	compare the current rate method and the temporal method, evaluate how each affects the parent company’s balance sheet and income statement, and determine which method is appropriate in various scenarios	5.16.d	compare the current rate method and the temporal method, evaluate how each affects the parent company’s balance sheet and income statement, and determine which method is appropriate in various scenarios	
Financial Reporting	5.18.e	calculate the translation effects and evaluate the translation of a subsidiary’s balance sheet and income statement into the parent company’s presentation currency	5.16.e	calculate the translation effects and evaluate the translation of a subsidiary’s balance sheet and income statement into the parent company’s presentation currency	
Financial Reporting	5.18.f	analyze how the current rate method and the temporal method affect financial statements and ratios	5.16.f	analyze how the current rate method and the temporal method affect financial statements and ratios	
Financial Reporting	5.18.g	analyze how alternative translation methods for subsidiaries operating in hyperinflationary economies affect financial statements and ratios	5.16.g	analyze how alternative translation methods for subsidiaries operating in hyperinflationary economies affect financial statements and ratios	
Financial Reporting	5.18.h	describe how multinational operations affect a company’s effective tax rate	5.16.h	describe how multinational operations affect a company’s effective tax rate	
Financial Reporting	5.18.i	explain how changes in the components of sales affect the sustainability of sales growth	5.16.i	explain how changes in the components of sales affect the sustainability of sales growth	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Financial Reporting	5.18.j	analyze how currency fluctuations potentially affect financial results, given a company's countries of operation	5.16.j	analyze how currency fluctuations potentially affect financial results, given a company's countries of operation	
Financial Reporting			5.17.a	describe how financial institutions differ from other companies	**New**
Financial Reporting			5.17.b	describe key aspects of financial regulations of financial institutions	**New**
Financial Reporting			5.17.c	explain the CAMELS (capital adequacy, asset quality, management, earnings, liquidity, and sensitivity) approach to analyzing a bank, including key ratios and its limitations	**New**
Financial Reporting			5.17.d	describe other factors to consider in analyzing a bank	**New**
Financial Reporting			5.17.e	analyze a bank based on financial statements and other factors	**New**
Financial Reporting			5.17.f	describe key ratios and other factors to consider in analyzing an insurance company	**New**
Financial Reporting	6.19.a	demonstrate the use of a conceptual framework for assessing the quality of a company's financial reports	6.18.a	demonstrate the use of a conceptual framework for assessing the quality of a company's financial reports	
Financial Reporting	6.19.b	explain potential problems that affect the quality of financial reports	6.18.b	explain potential problems that affect the quality of financial reports	
Financial Reporting	6.19.c	describe how to evaluate the quality of a company's financial reports	6.18.c	describe how to evaluate the quality of a company's financial reports	
Financial Reporting	6.19.d	evaluate the quality of a company's financial reports	6.18.d	evaluate the quality of a company's financial reports	
Financial Reporting	6.19.e	describe the concept of sustainable (persistent) earnings	6.18.e	describe the concept of sustainable (persistent) earnings	
Financial Reporting	6.19.f	describe indicators of earnings quality	6.18.f	describe indicators of earnings quality	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Financial Reporting	6.19.g	explain mean reversion in earnings and how the accruals component of earnings affects the speed of mean reversion	6.18.g	explain mean reversion in earnings and how the accruals component of earnings affects the speed of mean reversion	
Financial Reporting	6.19.h	evaluate the earnings quality of a company	6.18.h	evaluate the earnings quality of a company	
Financial Reporting	6.19.i	describe indicators of cash flow quality	6.18.i	describe indicators of cash flow quality	
Financial Reporting	6.19.j	evaluate the cash flow quality of a company	6.18.j	evaluate the cash flow quality of a company	
Financial Reporting	6.19.k	describe indicators of balance sheet quality	6.18.k	describe indicators of balance sheet quality	
Financial Reporting	6.19.l	evaluate the balance sheet quality of a company	6.18.l	evaluate the balance sheet quality of a company	
Financial Reporting	6.19.m	describe sources of information about risk	6.18.m	describe sources of information about risk	
Financial Reporting	6.20.a	demonstrate the use of a framework for the analysis of financial statements, given a particular problem, question, or purpose (e.g., valuing equity based on comparables, critiquing a credit rating, obtaining a comprehensive picture of financial leverage, evaluating the perspectives given in management’s discussion of financial results)	6.19.a	demonstrate the use of a framework for the analysis of financial statements, given a particular problem, question, or purpose (e.g., valuing equity based on comparables, critiquing a credit rating, obtaining a comprehensive picture of financial leverage, evaluating the perspectives given in management’s discussion of financial results)	
Financial Reporting	6.20.b	identify financial reporting choices and biases that affect the quality and comparability of companies’ financial statements and explain how such biases may affect financial decisions	6.19.b	identify financial reporting choices and biases that affect the quality and comparability of companies’ financial statements and explain how such biases may affect financial decisions	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Financial Reporting	6.20.c	evaluate the quality of a company's financial data and recommend appropriate adjustments to improve quality and comparability with similar companies, including adjustments for differences in accounting standards, methods, and assumptions	6.19.c	evaluate the quality of a company's financial data and recommend appropriate adjustments to improve quality and comparability with similar companies, including adjustments for differences in accounting standards, methods, and assumptions	
Financial Reporting	6.20.d	evaluate how a given change in accounting standards, methods, or assumptions affects financial statements and ratios	6.19.d	evaluate how a given change in accounting standards, methods, or assumptions affects financial statements and ratios	
Financial Reporting	6.20.e	analyze and interpret how balance sheet modifications, earnings normalization, and cash flow statement related modifications affect a company's financial statements, financial ratios, and overall financial condition	6.19.e	analyze and interpret how balance sheet modifications, earnings normalization, and cash flow statement related modifications affect a company's financial statements, financial ratios, and overall financial condition	
Corporate Finance	7.21.a	calculate the yearly cash flows of expansion and replacement capital projects and evaluate how the choice of depreciation method affects those cash flows	7.20.a	calculate the yearly cash flows of expansion and replacement capital projects and evaluate how the choice of depreciation method affects those cash flows	
Corporate Finance	7.21.b	explain how inflation affects capital budgeting analysis	7.20.b	explain how inflation affects capital budgeting analysis	
Corporate Finance	7.21.c	evaluate capital projects and determine the optimal capital project in situations of 1) mutually exclusive projects with unequal lives, using either the least common multiple of lives approach or the equivalent annual annuity approach, and 2) capital rationing	7.20.c	evaluate capital projects and determine the optimal capital project in situations of 1) mutually exclusive projects with unequal lives, using either the least common multiple of lives approach or the equivalent annual annuity approach, and 2) capital rationing	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	7.21.d	explain how sensitivity analysis, scenario analysis, and Monte Carlo simulation can be used to assess the stand-alone risk of a capital project	7.20.d	explain how sensitivity analysis, scenario analysis, and Monte Carlo simulation can be used to assess the stand-alone risk of a capital project	
Corporate Finance	7.21.e	explain and calculate the discount rate, based on market risk methods, to use in valuing a capital project	7.20.e	explain and calculate the discount rate, based on market risk methods, to use in valuing a capital project	
Corporate Finance	7.21.f	describe types of real options and evaluate a capital project using real options	7.20.f	describe types of real options and evaluate a capital project using real options	
Corporate Finance	7.21.g	describe common capital budgeting pitfalls	7.20.g	describe common capital budgeting pitfalls	
Corporate Finance	7.21.h	calculate and interpret accounting income and economic income in the context of capital budgeting	7.20.h	calculate and interpret accounting income and economic income in the context of capital budgeting	
Corporate Finance	7.21.i	distinguish among the economic profit, residual income, and claims valuation models for capital budgeting and evaluate a capital project using each	7.20.i	distinguish among the economic profit, residual income, and claims valuation models for capital budgeting and evaluate a capital project using each	
Corporate Finance	7.22.a	explain the Modigliani–Miller propositions regarding capital structure, including the effects of leverage, taxes, financial distress, agency costs, and asymmetric information on a company’s cost of equity, cost of capital, and optimal capital structure	7.21.a	explain the Modigliani–Miller propositions regarding capital structure, including the effects of leverage, taxes, financial distress, agency costs, and asymmetric information on a company’s cost of equity, cost of capital, and optimal capital structure	
Corporate Finance	7.22.b	describe target capital structure and explain why a company’s actual capital structure may fluctuate around its target	7.21.b	describe target capital structure and explain why a company’s actual capital structure may fluctuate around its target	
Corporate Finance	7.22.c	describe the role of debt ratings in capital structure policy	7.21.c	describe the role of debt ratings in capital structure policy	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	7.22.d	explain factors an analyst should consider in evaluating the effect of capital structure policy on valuation	7.21.d	explain factors an analyst should consider in evaluating the effect of capital structure policy on valuation	
Corporate Finance	7.22.e	describe international differences in the use of financial leverage, factors that explain these differences, and implications of these differences for investment analysis	7.21.e	describe international differences in the use of financial leverage, factors that explain these differences, and implications of these differences for investment analysis	
Corporate Finance	7.23.a	describe the expected effect of regular cash dividends, extra dividends, liquidating dividends, stock dividends, stock splits, and reverse stock splits on shareholders' wealth and a company's financial ratios	7.22.a	describe the expected effect of regular cash dividends, extra dividends, liquidating dividends, stock dividends, stock splits, and reverse stock splits on shareholders' wealth and a company's financial ratios	
Corporate Finance	7.23.b	compare theories of dividend policy and explain implications of each for share value given a description of a corporate dividend action	7.22.b	compare theories of dividend policy and explain implications of each for share value given a description of a corporate dividend action	
Corporate Finance	7.23.c	describe types of information (signals) that dividend initiations, increases, decreases, and omissions may convey	7.22.c	describe types of information (signals) that dividend initiations, increases, decreases, and omissions may convey	
Corporate Finance	7.23.d	explain how clientele effects and agency costs may affect a company's payout policy	7.22.d	explain how clientele effects and agency costs may affect a company's payout policy	
Corporate Finance	7.23.e	explain factors that affect dividend policy in practice	7.22.e	explain factors that affect dividend policy in practice	
Corporate Finance	7.23.f	calculate and interpret the effective tax rate on a given currency unit of corporate earnings under double taxation, dividend imputation, and split-rate tax systems	7.22.f	calculate and interpret the effective tax rate on a given currency unit of corporate earnings under double taxation, dividend imputation, and split-rate tax systems	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	7.23.g	compare stable dividend, constant dividend payout ratio, and residual dividend payout policies, and calculate the dividend under each policy	7.22.g	compare stable dividend, constant dividend payout ratio, and residual dividend payout policies, and calculate the dividend under each policy	
Corporate Finance	7.23.h	compare share repurchase methods	7.22.h	compare share repurchase methods	
Corporate Finance	7.23.i	calculate and compare the effect of a share repurchase on earnings per share when 1) the repurchase is financed with the company's surplus cash and 2) the company uses debt to finance the repurchase	7.22.i	calculate and compare the effect of a share repurchase on earnings per share when 1) the repurchase is financed with the company's surplus cash and 2) the company uses debt to finance the repurchase	
Corporate Finance	7.23.j	calculate the effect of a share repurchase on book value per share	7.22.j	calculate the effect of a share repurchase on book value per share	
Corporate Finance	7.23.k	explain the choice between paying cash dividends and repurchasing shares	7.22.k	explain the choice between paying cash dividends and repurchasing shares	
Corporate Finance	7.23.l	describe broad trends in corporate payout policies	7.22.l	describe broad trends in corporate payout policies	
Corporate Finance	7.23.m	calculate and interpret dividend coverage ratios based on 1) net income and 2) free cash flow	7.22.m	calculate and interpret dividend coverage ratios based on 1) net income and 2) free cash flow	
Corporate Finance	7.23.n	identify characteristics of companies that may not be able to sustain their cash dividend	7.22.n	identify characteristics of companies that may not be able to sustain their cash dividend	
Corporate Finance	8.24.a	compare interests of key stakeholder groups and explain the purpose of a stakeholder impact analysis	8.23.a	compare interests of key stakeholder groups and explain the purpose of a stakeholder impact analysis	
Corporate Finance	8.24.b	discuss problems that can arise in principal–agent relationships and mechanisms that may mitigate such problems	8.23.b	discuss problems that can arise in principal–agent relationships and mechanisms that may mitigate such problems	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	8.24.c	discuss roots of unethical behavior and how managers might ensure that ethical issues are considered in business decision making	8.23.c	discuss roots of unethical behavior and how managers might ensure that ethical issues are considered in business decision making	
Corporate Finance	8.24.d	compare the Friedman doctrine, Utilitarianism, Kantian Ethics, and Rights and Justice Theories as approaches to ethical decision making	8.23.d	compare the Friedman doctrine, Utilitarianism, Kantian Ethics, and Rights and Justice Theories as approaches to ethical decision making	
Corporate Finance	8.25.a	describe objectives and core attributes of an effective corporate governance system and evaluate whether a company’s corporate governance has those attributes	8.24.a	describe objectives and core attributes of an effective corporate governance system and evaluate whether a company’s corporate governance has those attributes	
Corporate Finance	8.25.b	compare major business forms and describe the conflicts of interest associated with each	8.24.b	compare major business forms and describe the conflicts of interest associated with each	
Corporate Finance	8.25.c	explain conflicts that arise in agency relationships, including manager–shareholder conflicts and director–shareholder conflicts	8.24.c	explain conflicts that arise in agency relationships, including manager–shareholder conflicts and director–shareholder conflicts	
Corporate Finance	8.25.d	describe responsibilities of the board of directors and explain qualifications and core competencies that an investment analyst should look for in the board of directors	8.24.d	describe responsibilities of the board of directors and explain qualifications and core competencies that an investment analyst should look for in the board of directors	
Corporate Finance	8.25.e	explain effective corporate governance practice as it relates to the board of directors and evaluate strengths and weaknesses of a company’s corporate governance practice	8.24.e	explain effective corporate governance practice as it relates to the board of directors and evaluate strengths and weaknesses of a company’s corporate governance practice	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	8.25.f	describe elements of a company's statement of corporate governance policies that investment analysts should assess	8.24.f	describe elements of a company's statement of corporate governance policies that investment analysts should assess	
Corporate Finance	8.25.g	describe environmental, social, and governance risk exposures	8.24.g	describe environmental, social, and governance risk exposures	
Corporate Finance	8.25.h	explain the valuation implications of corporate governance	8.24.h	explain the valuation implications of corporate governance	
Corporate Finance	8.26.a	classify merger and acquisition (M&A) activities based on forms of integration and relatedness of business activities	8.25.a	classify merger and acquisition (M&A) activities based on forms of integration and relatedness of business activities	
Corporate Finance	8.26.b	explain common motivations behind M&A activity	8.25.b	explain common motivations behind M&A activity	
Corporate Finance	8.26.c	explain bootstrapping of earnings per share (EPS) and calculate a company's post-merger EPS	8.25.c	explain bootstrapping of earnings per share (EPS) and calculate a company's post-merger EPS	
Corporate Finance	8.26.d	explain, based on industry life cycles, the relation between merger motivations and types of mergers	8.25.d	explain, based on industry life cycles, the relation between merger motivations and types of mergers	
Corporate Finance	8.26.e	contrast merger transaction characteristics by form of acquisition, method of payment, and attitude of target management	8.25.e	contrast merger transaction characteristics by form of acquisition, method of payment, and attitude of target management	
Corporate Finance	8.26.f	distinguish among pre-offer and post-offer takeover defense mechanisms	8.25.f	distinguish among pre-offer and post-offer takeover defense mechanisms	
Corporate Finance	8.26.g	calculate and interpret the Herfindahl–Hirschman Index and evaluate the likelihood of an antitrust challenge for a given business combination	8.25.g	calculate and interpret the Herfindahl–Hirschman Index and evaluate the likelihood of an antitrust challenge for a given business combination	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Corporate Finance	8.26.h	compare the discounted cash flow, comparable company, and comparable transaction analyses for valuing a target company, including the advantages and disadvantages of each	8.25.h	compare the discounted cash flow, comparable company, and comparable transaction analyses for valuing a target company, including the advantages and disadvantages of each	
Corporate Finance	8.26.i	calculate free cash flows for a target company and estimate the company’s intrinsic value based on discounted cash flow analysis	8.25.i	calculate free cash flows for a target company and estimate the company’s intrinsic value based on discounted cash flow analysis	
Corporate Finance	8.26.j	estimate the value of a target company using comparable company and comparable transaction analyses	8.25.j	estimate the value of a target company using comparable company and comparable transaction analyses	
Corporate Finance	8.26.k	evaluate a takeover bid and calculate the estimated post-acquisition value of an acquirer and the gains accrued to the target shareholders versus the acquirer shareholders	8.25.k	evaluate a takeover bid and calculate the estimated post-acquisition value of an acquirer and the gains accrued to the target shareholders versus the acquirer shareholders	
Corporate Finance	8.26.l	explain how price and payment method affect the distribution of risks and benefits in M&A transactions	8.25.l	explain how price and payment method affect the distribution of risks and benefits in M&A transactions	
Corporate Finance	8.26.m	describe characteristics of M&A transactions that create value	8.25.m	describe characteristics of M&A transactions that create value	
Corporate Finance	8.26.n	distinguish among equity carve-outs, spin-offs, split-offs, and liquidation	8.25.n	distinguish among equity carve-outs, spin-offs, split-offs, and liquidation	
Corporate Finance	8.26.o	explain common reasons for restructuring	8.25.o	explain common reasons for restructuring	
Equity	9.27.a	define valuation and intrinsic value and explain sources of perceived mispricing	9.26.a	define valuation and intrinsic value and explain sources of perceived mispricing	
Equity	9.27.b	explain the going concern assumption and contrast a going concern value to a liquidation value	9.26.b	explain the going concern assumption and contrast a going concern value to a liquidation value	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	9.27.c	describe definitions of value and justify which definition of value is most relevant to public company valuation	9.26.c	describe definitions of value and justify which definition of value is most relevant to public company valuation	
Equity	9.27.d	describe applications of equity valuation	9.26.d	describe applications of equity valuation	
Equity	9.27.e	describe questions that should be addressed in conducting an industry and competitive analysis	9.26.e	describe questions that should be addressed in conducting an industry and competitive analysis	
Equity	9.27.f	contrast absolute and relative valuation models and describe examples of each type of model	9.26.f	contrast absolute and relative valuation models and describe examples of each type of model	
Equity	9.27.g	describe sum-of-the-parts valuation and conglomerate discounts	9.26.g	describe sum-of-the-parts valuation and conglomerate discounts	
Equity	9.27.h	explain broad criteria for choosing an appropriate approach for valuing a given company	9.26.h	explain broad criteria for choosing an appropriate approach for valuing a given company	
Equity	9.28.a	distinguish among realized holding period return, expected holding period return, required return, return from convergence of price to intrinsic value, discount rate, and internal rate of return	9.27.a	distinguish among realized holding period return, expected holding period return, required return, return from convergence of price to intrinsic value, discount rate, and internal rate of return	
Equity	9.28.b	calculate and interpret an equity risk premium using historical and forward-looking estimation approaches	9.27.b	calculate and interpret an equity risk premium using historical and forward-looking estimation approaches	
Equity	9.28.c	estimate the required return on an equity investment using the capital asset pricing model, the Fama–French model, the Pastor–Stambaugh model, macroeconomic multifactor models, and the build-up method (e.g., bond yield plus risk premium)	9.27.c	estimate the required return on an equity investment using the capital asset pricing model, the Fama–French model, the Pastor–Stambaugh model, macroeconomic multifactor models, and the build-up method (e.g., bond yield plus risk premium)	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	9.28.d	explain beta estimation for public companies, thinly traded public companies, and nonpublic companies	9.27.d	explain beta estimation for public companies, thinly traded public companies, and nonpublic companies	
Equity	9.28.e	describe strengths and weaknesses of methods used to estimate the required return on an equity investment	9.27.e	describe strengths and weaknesses of methods used to estimate the required return on an equity investment	
Equity	9.28.f	explain international considerations in required return estimation	9.27.f	explain international considerations in required return estimation	
Equity	9.28.g	explain and calculate the weighted average cost of capital for a company	9.27.g	explain and calculate the weighted average cost of capital for a company	
Equity	9.28.h	evaluate the appropriateness of using a particular rate of return as a discount rate, given a description of the cash flow to be discounted and other relevant facts	9.27.h	evaluate the appropriateness of using a particular rate of return as a discount rate, given a description of the cash flow to be discounted and other relevant facts	
Equity	10.29.a	compare top-down, bottom-up, and hybrid approaches for developing inputs to equity valuation models	10.28.a	compare top-down, bottom-up, and hybrid approaches for developing inputs to equity valuation models	
Equity	10.29.b	compare "growth relative to GDP growth" and "market growth and market share" approaches to forecasting revenue	10.28.b	compare "growth relative to GDP growth" and "market growth and market share" approaches to forecasting revenue	
Equity	10.29.c	evaluate whether economies of scale are present in an industry by analyzing operating margins and sales levels	10.28.c	evaluate whether economies of scale are present in an industry by analyzing operating margins and sales levels	
Equity	10.29.d	forecast the following costs: cost of goods sold, selling general and administrative costs, financing costs, and income taxes	10.28.d	forecast the following costs: cost of goods sold, selling general and administrative costs, financing costs, and income taxes	
Equity	10.29.e	describe approaches to balance sheet modeling	10.28.e	describe approaches to balance sheet modeling	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	10.29.f	describe the relationship between return on invested capital and competitive advantage	10.28.f	describe the relationship between return on invested capital and competitive advantage	
Equity	10.29.g	explain how competitive factors affect prices and costs	10.28.g	explain how competitive factors affect prices and costs	
Equity	10.29.h	judge the competitive position of a company based on a Porter's five forces analysis	10.28.h	judge the competitive position of a company based on a Porter's five forces analysis	
Equity	10.29.i	explain how to forecast industry and company sales and costs when they are subject to price inflation or deflation	10.28.i	explain how to forecast industry and company sales and costs when they are subject to price inflation or deflation	
Equity	10.29.j	evaluate the effects of technological developments on demand, selling prices, costs, and margins	10.28.j	evaluate the effects of technological developments on demand, selling prices, costs, and margins	
Equity	10.29.k	explain considerations in the choice of an explicit forecast horizon	10.28.k	explain considerations in the choice of an explicit forecast horizon	
Equity	10.29.l	explain an analyst's choices in developing projections beyond the short-term forecast horizon	10.28.l	explain an analyst's choices in developing projections beyond the short-term forecast horizon	
Equity	10.29.m	demonstrate the development of a sales-based pro forma company model	10.28.m	demonstrate the development of a sales-based pro forma company model	
Equity	10.30.a	compare dividends, free cash flow, and residual income as inputs to discounted cash flow models and identify investment situations for which each measure is suitable	10.29.a	compare dividends, free cash flow, and residual income as inputs to discounted cash flow models and identify investment situations for which each measure is suitable	
Equity	10.30.b	calculate and interpret the value of a common stock using the dividend discount model (DDM) for single and multiple holding periods	10.29.b	calculate and interpret the value of a common stock using the dividend discount model (DDM) for single and multiple holding periods	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	10.30.c	calculate the value of a common stock using the Gordon growth model and explain the model's underlying assumptions	10.29.c	calculate the value of a common stock using the Gordon growth model and explain the model's underlying assumptions	
Equity	10.30.d	calculate the value of a common stock using the Gordon growth model and explain the model's underlying assumptions	10.29.d	calculate and interpret the implied growth rate of dividends using the Gordon growth model and current stock price	**Wording Change**
Equity	10.30.e	calculate and interpret the present value of growth opportunities (PVGO) and the component of the leading price-to-earnings ratio (P/E) related to PVGO	10.29.e	calculate and interpret the present value of growth opportunities (PVGO) and the component of the leading price-to-earnings ratio (P/E) related to PVGO	
Equity	10.30.f	calculate and interpret the justified leading and trailing P/Es using the Gordon growth model	10.29.f	calculate and interpret the justified leading and trailing P/Es using the Gordon growth model	
Equity	10.30.g	calculate the value of noncallable fixed-rate perpetual preferred stock	10.29.g	calculate the value of noncallable fixed-rate perpetual preferred stock	
Equity	10.30.h	describe strengths and limitations of the Gordon growth model and justify its selection to value a company's common shares	10.29.h	describe strengths and limitations of the Gordon growth model and justify its selection to value a company's common shares	
Equity	10.30.i	explain the assumptions and justify the selection of the two-stage DDM, the H-model, the three-stage DDM, or spreadsheet modeling to value a company's common shares	10.29.i	explain the assumptions and justify the selection of the two-stage DDM, the H-model, the three-stage DDM, or spreadsheet modeling to value a company's common shares	
Equity	10.30.j	explain the growth phase, transitional phase, and maturity phase of a business	10.29.j	explain the growth phase, transitional phase, and maturity phase of a business	
Equity	10.30.k	describe terminal value and explain alternative approaches to determining the terminal value in a DDM	10.29.k	describe terminal value and explain alternative approaches to determining the terminal value in a DDM	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	10.30.l	calculate and interpret the value of common shares using the two-stage DDM, the H-model, and the three-stage DDM	10.29.l	calculate and interpret the value of common shares using the two-stage DDM, the H-model, and the three-stage DDM	
Equity	10.30.m	estimate a required return based on any DDM, including the Gordon growth model and the H-model	10.29.m	estimate a required return based on any DDM, including the Gordon growth model and the H-model	
Equity	10.30.n	explain the use of spreadsheet modeling to forecast dividends and to value common shares	10.29.n	explain the use of spreadsheet modeling to forecast dividends and to value common shares	
Equity	10.30.o	calculate and interpret the sustainable growth rate of a company and demonstrate the use of DuPont analysis to estimate a company’s sustainable growth rate	10.29.o	calculate and interpret the sustainable growth rate of a company and demonstrate the use of DuPont analysis to estimate a company’s sustainable growth rate	
Equity	10.30.p	evaluate whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value	10.29.p	evaluate whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value	
Equity	11.31.a	compare the free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) approaches to valuation	11.30.a	compare the free cash flow to the firm (FCFF) and free cash flow to equity (FCFE) approaches to valuation	
Equity	11.31.b	explain the ownership perspective implicit in the FCFE approach	11.30.b	explain the ownership perspective implicit in the FCFE approach	
Equity	11.31.c	explain the appropriate adjustments to net income, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation, and amortization (EBITDA), and cash flow from operations (CFO) to calculate FCFF and FCFE	11.30.c	explain the appropriate adjustments to net income, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation, and amortization (EBITDA), and cash flow from operations (CFO) to calculate FCFF and FCFE	
Equity	11.31.d	calculate FCFF and FCFE	11.30.d	calculate FCFF and FCFE	
Equity	11.31.e	describe approaches for forecasting FCFF and FCFE	11.30.e	describe approaches for forecasting FCFF and FCFE	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.31.f	compare the FCFE model and dividend discount models	11.30.f	compare the FCFE model and dividend discount models	
Equity	11.31.g	explain how dividends, share repurchases, share issues, and changes in leverage may affect future FCFF and FCFE	11.30.g	explain how dividends, share repurchases, share issues, and changes in leverage may affect future FCFF and FCFE	
Equity	11.31.h	evaluate the use of net income and EBITDA as proxies for cash flow in valuation	11.30.h	evaluate the use of net income and EBITDA as proxies for cash flow in valuation	
Equity	11.31.i	explain the single-stage (stable-growth), two-stage, and three-stage FCFF and FCFE models and select and justify the appropriate model given a company's characteristics	11.30.i	explain the single-stage (stable-growth), two-stage, and three-stage FCFF and FCFE models and select and justify the appropriate model given a company's characteristics	
Equity	11.31.j	estimate a company's value using the appropriate free cash flow model(s)	11.30.j	estimate a company's value using the appropriate free cash flow model(s)	
Equity	11.31.k	explain the use of sensitivity analysis in FCFF and FCFE valuations	11.30.k	explain the use of sensitivity analysis in FCFF and FCFE valuations	
Equity	11.31.l	describe approaches for calculating the terminal value in a multistage valuation model	11.30.l	describe approaches for calculating the terminal value in a multistage valuation model	
Equity	11.31.m	evaluate whether a stock is overvalued, fairly valued, or undervalued based on a free cash flow valuation model	11.30.m	evaluate whether a stock is overvalued, fairly valued, or undervalued based on a free cash flow valuation model	
Equity	11.32.a	distinguish between the method of comparables and the method based on forecasted fundamentals as approaches to using price multiples in valuation, and explain economic rationales for each approach	11.31.a	distinguish between the method of comparables and the method based on forecasted fundamentals as approaches to using price multiples in valuation, and explain economic rationales for each approach	
Equity	11.32.b	calculate and interpret a justified price multiple	11.31.b	calculate and interpret a justified price multiple	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.32.c	describe rationales for and possible drawbacks to using alternative price multiples and dividend yield in valuation	11.31.c	describe rationales for and possible drawbacks to using alternative price multiples and dividend yield in valuation	
Equity	11.32.d	calculate and interpret alternative price multiples and dividend yield	11.31.d	calculate and interpret alternative price multiples and dividend yield	
Equity	11.32.e	calculate and interpret underlying earnings, explain methods of normalizing earnings per share (EPS), and calculate normalized EPS	11.31.e	calculate and interpret underlying earnings, explain methods of normalizing earnings per share (EPS), and calculate normalized EPS	
Equity	11.32.f	explain and justify the use of earnings yield (E/P)	11.31.f	explain and justify the use of earnings yield (E/P)	
Equity	11.32.g	describe fundamental factors that influence alternative price multiples and dividend yield	11.31.g	describe fundamental factors that influence alternative price multiples and dividend yield	
Equity	11.32.h	calculate and interpret the justified price-to-earnings ratio (P/E), price-to-book ratio (P/B), and price-to-sales ratio (P/S) for a stock, based on forecasted fundamentals	11.31.h	calculate and interpret the justified price-to-earnings ratio (P/E), price-to-book ratio (P/B), and price-to-sales ratio (P/S) for a stock, based on forecasted fundamentals	
Equity	11.32.i	calculate and interpret a predicted P/E, given a cross-sectional regression on fundamentals, and explain limitations to the cross-sectional regression methodology	11.31.i	calculate and interpret a predicted P/E, given a cross-sectional regression on fundamentals, and explain limitations to the cross-sectional regression methodology	
Equity	11.32.j	evaluate a stock by the method of comparables and explain the importance of fundamentals in using the method of comparables	11.31.j	evaluate a stock by the method of comparables and explain the importance of fundamentals in using the method of comparables	
Equity	11.32.k	calculate and interpret the P/E-to-growth ratio (PEG) and explain its use in relative valuation	11.31.k	calculate and interpret the P/E-to-growth ratio (PEG) and explain its use in relative valuation	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.32.l	calculate and explain the use of price multiples in determining terminal value in a multistage discounted cash flow (DCF) model	11.31.l	calculate and explain the use of price multiples in determining terminal value in a multistage discounted cash flow (DCF) model	
Equity	11.32.m	explain alternative definitions of cash flow used in price and enterprise value (EV) multiples and describe limitations of each definition	11.31.m	explain alternative definitions of cash flow used in price and enterprise value (EV) multiples and describe limitations of each definition	
Equity	11.32.n	calculate and interpret EV multiples and evaluate the use of EV/EBITDA	11.31.n	calculate and interpret EV multiples and evaluate the use of EV/EBITDA	
Equity	11.32.o	explain sources of differences in cross-border valuation comparisons	11.31.o	explain sources of differences in cross-border valuation comparisons	
Equity	11.32.p	describe momentum indicators and their use in valuation	11.31.p	describe momentum indicators and their use in valuation	
Equity	11.32.q	explain the use of the arithmetic mean, the harmonic mean, the weighted harmonic mean, and the median to describe the central tendency of a group of multiples	11.31.q	explain the use of the arithmetic mean, the harmonic mean, the weighted harmonic mean, and the median to describe the central tendency of a group of multiples	
Equity	11.32.r	evaluate whether a stock is overvalued, fairly valued, or undervalued based on comparisons of multiples	11.31.r	evaluate whether a stock is overvalued, fairly valued, or undervalued based on comparisons of multiples	
Equity	11.33.a	calculate and interpret residual income, economic value added, and market value added	11.32.a	calculate and interpret residual income, economic value added, and market value added	
Equity	11.33.b	describe the uses of residual income models	11.32.b	describe the uses of residual income models	
Equity	11.33.c	calculate the intrinsic value of a common stock using the residual income model and compare value recognition in residual income and other present value models	11.32.c	calculate the intrinsic value of a common stock using the residual income model and compare value recognition in residual income and other present value models	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.33.d	explain fundamental determinants of residual income	11.32.d	explain fundamental determinants of residual income	
Equity	11.33.e	explain the relation between residual income valuation and the justified price-to-book ratio based on forecasted fundamentals	11.32.e	explain the relation between residual income valuation and the justified price-to-book ratio based on forecasted fundamentals	
Equity	11.33.f	calculate and interpret the intrinsic value of a common stock using single-stage (constant-growth) and multistage residual income models	11.32.f	calculate and interpret the intrinsic value of a common stock using single-stage (constant-growth) and multistage residual income models	
Equity	11.33.g	calculate the implied growth rate in residual income, given the market price-to-book ratio and an estimate of the required rate of return on equity	11.32.g	calculate the implied growth rate in residual income, given the market price-to-book ratio and an estimate of the required rate of return on equity	
Equity	11.33.h	explain continuing residual income and justify an estimate of continuing residual income at the forecast horizon, given company and industry prospects	11.32.h	explain continuing residual income and justify an estimate of continuing residual income at the forecast horizon, given company and industry prospects	
Equity	11.33.i	compare residual income models to dividend discount and free cash flow models	11.32.i	compare residual income models to dividend discount and free cash flow models	
Equity	11.33.j	explain strengths and weaknesses of residual income models and justify the selection of a residual income model to value a company's common stock	11.32.j	explain strengths and weaknesses of residual income models and justify the selection of a residual income model to value a company's common stock	
Equity	11.33.k	describe accounting issues in applying residual income models	11.32.k	describe accounting issues in applying residual income models	
Equity	11.33.l	evaluate whether a stock is overvalued, fairly valued, or undervalued based on a residual income model	11.32.l	evaluate whether a stock is overvalued, fairly valued, or undervalued based on a residual income model	
Equity	11.34.a	compare public and private company valuation	11.33.a	compare public and private company valuation	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.34.b	describe uses of private business valuation and explain applications of greatest concern to financial analysts	11.33.b	describe uses of private business valuation and explain applications of greatest concern to financial analysts	
Equity	11.34.c	explain various definitions of value and demonstrate how different definitions can lead to different estimates of value	11.33.c	explain various definitions of value and demonstrate how different definitions can lead to different estimates of value	
Equity	11.34.d	explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach	11.33.d	explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach	
Equity	11.34.e	explain cash flow estimation issues related to private companies and adjustments required to estimate normalized earnings	11.33.e	explain cash flow estimation issues related to private companies and adjustments required to estimate normalized earnings	
Equity	11.34.f	calculate the value of a private company using free cash flow, capitalized cash flow, and/or excess earnings methods	11.33.f	calculate the value of a private company using free cash flow, capitalized cash flow, and/or excess earnings methods	
Equity	11.34.g	explain factors that require adjustment when estimating the discount rate for private companies	11.33.g	explain factors that require adjustment when estimating the discount rate for private companies	
Equity	11.34.h	compare models used to estimate the required rate of return to private company equity (for example, the CAPM, the expanded CAPM, and the build-up approach)	11.33.h	compare models used to estimate the required rate of return to private company equity (for example, the CAPM, the expanded CAPM, and the build-up approach)	
Equity	11.34.i	calculate the value of a private company based on market approach methods and describe advantages and disadvantages of each method	11.33.i	calculate the value of a private company based on market approach methods and describe advantages and disadvantages of each method	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Equity	11.34.j	describe the asset-based approach to private company valuation	11.33.j	describe the asset-based approach to private company valuation	
Equity	11.34.k	explain and evaluate the effects on private company valuations of discounts and premiums based on control and marketability	11.33.k	explain and evaluate the effects on private company valuations of discounts and premiums based on control and marketability	
Equity	11.34.l	describe the role of valuation standards in valuing private companies	11.33.l	describe the role of valuation standards in valuing private companies	
Fixed Income	12.35.a	describe relationships among spot rates, forward rates, yield to maturity, expected and realized returns on bonds, and the shape of the yield curve	12.34.a	describe relationships among spot rates, forward rates, yield to maturity, expected and realized returns on bonds, and the shape of the yield curve	
Fixed Income	12.35.b	describe the forward pricing and forward rate models and calculate forward and spot prices and rates using those models	12.34.b	describe the forward pricing and forward rate models and calculate forward and spot prices and rates using those models	
Fixed Income	12.35.c	describe how zero-coupon rates (spot rates) may be obtained from the par curve by bootstrapping	12.34.c	describe how zero-coupon rates (spot rates) may be obtained from the par curve by bootstrapping	
Fixed Income	12.35.d	describe the assumptions concerning the evolution of spot rates in relation to forward rates implicit in active bond portfolio management	12.34.d	describe the assumptions concerning the evolution of spot rates in relation to forward rates implicit in active bond portfolio management	
Fixed Income	12.35.e	describe the strategy of riding the yield curve	12.34.e	describe the strategy of riding the yield curve	
Fixed Income	12.35.f	explain the swap rate curve and why and how market participants use it in valuation	12.34.f	explain the swap rate curve and why and how market participants use it in valuation	
Fixed Income	12.35.g	calculate and interpret the swap spread for a given maturity	12.34.g	calculate and interpret the swap spread for a given maturity	
Fixed Income	12.35.h	describe the Z-spread	12.34.h	describe the Z-spread	
Fixed Income	12.35.i	describe the TED and Libor–OIS spreads	12.34.i	describe the TED and Libor–OIS spreads	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Fixed Income	12.35.j	explain traditional theories of the term structure of interest rates and describe the implications of each theory for forward rates and the shape of the yield curve	12.34.j	explain traditional theories of the term structure of interest rates and describe the implications of each theory for forward rates and the shape of the yield curve	
Fixed Income	12.35.k	describe modern term structure models and how they are used	12.34.k	describe modern term structure models and how they are used	
Fixed Income	12.35.l	explain how a bond’s exposure to each of the factors driving the yield curve can be measured and how these exposures can be used to manage yield curve risks	12.34.l	explain how a bond’s exposure to each of the factors driving the yield curve can be measured and how these exposures can be used to manage yield curve risks	
Fixed Income	12.35.m	explain the maturity structure of yield volatilities and their effect on price volatility	12.34.m	explain the maturity structure of yield volatilities and their effect on price volatility	
Fixed Income	12.36.a	explain what is meant by arbitrage-free valuation of a fixed-income instrument	12.35.a	explain what is meant by arbitrage-free valuation of a fixed-income instrument	
Fixed Income	12.36.b	calculate the arbitrage-free value of an option-free, fixed-rate coupon bond	12.35.b	calculate the arbitrage-free value of an option-free, fixed-rate coupon bond	
Fixed Income	12.36.c	describe a binomial interest rate tree framework	12.35.c	describe a binomial interest rate tree framework	
Fixed Income	12.36.d	describe the backward induction valuation methodology and calculate the value of a fixed-income instrument given its cash flow at each node	12.35.d	describe the backward induction valuation methodology and calculate the value of a fixed-income instrument given its cash flow at each node	
Fixed Income	12.36.e	describe the process of calibrating a binomial interest rate tree to match a specific term structure	12.35.e	describe the process of calibrating a binomial interest rate tree to match a specific term structure	
Fixed Income	12.36.f	compare pricing using the zero-coupon yield curve with pricing using an arbitrage-free binomial lattice	12.35.f	compare pricing using the zero-coupon yield curve with pricing using an arbitrage-free binomial lattice	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Fixed Income	12.36.g	describe pathwise valuation in a binomial interest rate framework and calculate the value of a fixed-income instrument given its cash flows along each path	12.35.g	describe pathwise valuation in a binomial interest rate framework and calculate the value of a fixed-income instrument given its cash flows along each path	
Fixed Income	12.36.h	describe a Monte Carlo forward-rate simulation and its application	12.35.h	describe a Monte Carlo forward-rate simulation and its application	
Fixed Income	13.37.a	describe fixed-income securities with embedded options	13.36.a	describe fixed-income securities with embedded options	
Fixed Income	13.37.b	explain the relationships between the values of a callable or putable bond, the underlying option-free (straight) bond, and the embedded option	13.36.b	explain the relationships between the values of a callable or putable bond, the underlying option-free (straight) bond, and the embedded option	
Fixed Income	13.37.c	describe how the arbitrage-free framework can be used to value a bond with embedded options	13.36.c	describe how the arbitrage-free framework can be used to value a bond with embedded options	
Fixed Income	13.37.d	explain how interest rate volatility affects the value of a callable or putable bond	13.36.d	explain how interest rate volatility affects the value of a callable or putable bond	
Fixed Income	13.37.e	explain how changes in the level and shape of the yield curve affect the value of a callable or putable bond	13.36.e	explain how changes in the level and shape of the yield curve affect the value of a callable or putable bond	
Fixed Income	13.37.f	calculate the value of a callable or putable bond from an interest rate tree	13.36.f	calculate the value of a callable or putable bond from an interest rate tree	
Fixed Income	13.37.g	explain the calculation and use of option-adjusted spreads	13.36.g	explain the calculation and use of option-adjusted spreads	
Fixed Income	13.37.h	explain how interest rate volatility affects option-adjusted spreads	13.36.h	explain how interest rate volatility affects option-adjusted spreads	
Fixed Income	13.37.i	calculate and interpret effective duration of a callable or putable bond	13.36.i	calculate and interpret effective duration of a callable or putable bond	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Fixed Income	13.37.j	compare effective durations of callable, putable, and straight bonds	13.36.j	compare effective durations of callable, putable, and straight bonds	
Fixed Income	13.37.k	describe the use of one-sided durations and key rate durations to evaluate the interest rate sensitivity of bonds with embedded options	13.36.k	describe the use of one-sided durations and key rate durations to evaluate the interest rate sensitivity of bonds with embedded options	
Fixed Income	13.37.l	compare effective convexities of callable, putable, and straight bonds	13.36.l	compare effective convexities of callable, putable, and straight bonds	
Fixed Income	13.37.m	calculate the value of a capped or floored floating-rate bond	13.36.m	calculate the value of a capped or floored floating-rate bond	
Fixed Income	13.37.n	describe defining features of a convertible bond	13.36.n	describe defining features of a convertible bond	
Fixed Income	13.37.o	calculate and interpret the components of a convertible bond's value	13.36.o	calculate and interpret the components of a convertible bond's value	
Fixed Income	13.37.p	describe how a convertible bond is valued in an arbitrage-free framework	13.36.p	describe how a convertible bond is valued in an arbitrage-free framework	
Fixed Income	13.37.q	compare the risk–return characteristics of a convertible bond with the risk–return characteristics of a straight bond and of the underlying common stock	13.36.q	compare the risk–return characteristics of a convertible bond with the risk–return characteristics of a straight bond and of the underlying common stock	
Fixed Income	13.38.a	explain probability of default, loss given default, expected loss, and present value of the expected loss and describe the relative importance of each across the credit spectrum	13.37.a	explain expected exposure, the loss given default, the probability of default, and the credit valuation adjustment	**Wording Change**
Fixed Income	13.38.b	explain credit scoring and credit ratings	13.37.b	explain credit scoring and credit ratings	
Fixed Income	13.38.c	explain strengths and weaknesses of credit ratings			**Removed**

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Fixed Income	13.38.d	explain structural models of corporate credit risk, including why equity can be viewed as a call option on the company's assets			**Removed**
Fixed Income	13.38.e	explain reduced form models of corporate credit risk, including why debt can be valued as the sum of expected discounted cash flows after adjusting for risk			**Removed**
Fixed Income	13.38.f	explain assumptions, strengths, and weaknesses of both structural and reduced form models of corporate credit risk			**Removed**
Fixed Income	13.38.g	explain the determinants of the term structure of credit spreads			**Removed**
Fixed Income	13.38.h	calculate and interpret the present value of the expected loss on a bond over a given time horizon			**Removed**
Fixed Income			13.37.c	calculate the expected return on a bond given transition in its credit rating	**New**
Fixed Income			13.37.d	explain structural and reduced-form models of corporate credit risk, including assumptions, strengths, and weaknesses	**New**
Fixed Income			13.37.e	calculate the value of a bond and its credit spread, given assumptions about the credit risk parameters	**New**
Fixed Income			13.37.f	interpret changes in a credit spread	**New**
Fixed Income			13.37.g	explain the determinants of the term structure of credit spreads and interpret a term structure of credit spreads	**New**

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Fixed Income	13.38.i	compare the credit analysis required for asset-backed securities to analysis of corporate debt	13.37.h	compare the credit analysis required for securitized debt to the credit analysis of corporate debt	**Wording Change**
Fixed Income	13.39.a	describe credit default swaps (CDS), single-name and index CDS, and the parameters that define a given CDS product	13.38.a	describe credit default swaps (CDS), single-name and index CDS, and the parameters that define a given CDS product	
Fixed Income	13.39.b	describe credit events and settlement protocols with respect to CDS	13.38.b	describe credit events and settlement protocols with respect to CDS	
Fixed Income	13.39.c	explain the principles underlying, and factors that influence, the market's pricing of CDS	13.38.c	explain the principles underlying, and factors that influence, the market's pricing of CDS	
Fixed Income	13.39.d	describe the use of CDS to manage credit exposures and to express views regarding changes in shape and/or level of the credit curve	13.38.d	describe the use of CDS to manage credit exposures and to express views regarding changes in shape and/or level of the credit curve	
Fixed Income	13.39.e	describe the use of CDS to take advantage of valuation disparities among separate markets, such as bonds, loans, equities, and equity-linked instruments	13.38.e	describe the use of CDS to take advantage of valuation disparities among separate markets, such as bonds, loans, equities, and equity-linked instruments	
Derivatives	14.40.a	describe and compare how equity, interest rate, fixed-income, and currency forward and futures contracts are priced and valued	14.39.a	describe and compare how equity, interest rate, fixed-income, and currency forward and futures contracts are priced and valued	
Derivatives	14.40.b	calculate and interpret the no-arbitrage value of equity, interest rate, fixed-income, and currency forward and futures contracts	14.39.b	calculate and interpret the no-arbitrage value of equity, interest rate, fixed-income, and currency forward and futures contracts	
Derivatives	14.40.c	describe and compare how interest rate, currency, and equity swaps are priced and valued	14.39.c	describe and compare how interest rate, currency, and equity swaps are priced and valued	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Derivatives	14.40.d	calculate and interpret the no-arbitrage value of interest rate, currency, and equity swaps	14.39.d	calculate and interpret the no-arbitrage value of interest rate, currency, and equity swaps	
Derivatives	14.41.a	describe and interpret the binomial option valuation model and its component terms	14.40.a	describe and interpret the binomial option valuation model and its component terms	
Derivatives	14.41.b	calculate the no-arbitrage values of European and American options using a two-period binomial model	14.40.b	calculate the no-arbitrage values of European and American options using a two-period binomial model	
Derivatives	14.41.c	identify an arbitrage opportunity involving options and describe the related arbitrage	14.40.c	identify an arbitrage opportunity involving options and describe the related arbitrage	
Derivatives	14.41.d	calculate and interpret the value of an interest rate option using a two-period binomial model	14.40.d	calculate and interpret the value of an interest rate option using a two-period binomial model	
Derivatives	14.41.e	describe how the value of a European option can be analyzed as the present value of the option’s expected payoff at expiration	14.40.e	describe how the value of a European option can be analyzed as the present value of the option’s expected payoff at expiration	
Derivatives	14.41.f	identify assumptions of the Black–Scholes–Merton option valuation model	14.40.f	identify assumptions of the Black–Scholes–Merton option valuation model	
Derivatives	14.41.g	interpret the components of the Black–Scholes–Merton model as applied to call options in terms of a leveraged position in the underlying	14.40.g	interpret the components of the Black–Scholes–Merton model as applied to call options in terms of a leveraged position in the underlying	
Derivatives	14.41.h	describe how the Black–Scholes–Merton model is used to value European options on equities and currencies	14.40.h	describe how the Black–Scholes–Merton model is used to value European options on equities and currencies	
Derivatives	14.41.i	describe how the Black model is used to value European options on futures	14.40.i	describe how the Black model is used to value European options on futures	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Derivatives	14.41.j	describe how the Black model is used to value European interest rate options and European swaptions	14.40.j	describe how the Black model is used to value European interest rate options and European swaptions	
Derivatives	14.41.k	interpret each of the option Greeks	14.40.k	interpret each of the option Greeks	
Derivatives	14.41.l	describe how a delta hedge is executed	14.40.l	describe how a delta hedge is executed	
Derivatives	14.41.m	describe the role of gamma risk in options trading	14.40.m	describe the role of gamma risk in options trading	
Derivatives	14.41.n	define implied volatility and explain how it is used in options trading	14.40.n	define implied volatility and explain how it is used in options trading	
Derivatives	14.42.a	describe how interest rate, currency, and equity swaps, futures, and forwards can be used to modify portfolio risk and return	14.41.a	describe how interest rate, currency, and equity swaps, futures, and forwards can be used to modify portfolio risk and return	
Derivatives	14.42.b	describe how to replicate an asset by using options and by using cash plus forwards or futures	14.41.b	describe how to replicate an asset by using options and by using cash plus forwards or futures	
Derivatives	14.42.c	describe the investment objectives, structure, payoff, and risk(s) of a covered call position	14.41.c	describe the investment objectives, structure, payoff, and risk(s) of a covered call position	
Derivatives	14.42.d	describe the investment objectives, structure, payoff, and risks(s) of a protective put position	14.41.d	describe the investment objectives, structure, payoff, and risks(s) of a protective put position	
Derivatives	14.42.e	calculate and interpret the value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration for covered calls and protective puts	14.41.e	calculate and interpret the value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration for covered calls and protective puts	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Derivatives	14.42.f	contrast protective put and covered call positions to being long an asset and short a forward on the asset	14.41.f	contrast protective put and covered call positions to being long an asset and short a forward on the asset	
Derivatives	14.42.g	describe the investment objective(s), structure, payoffs, and risks of the following option strategies: bull spread, bear spread, collar, and straddle	14.41.g	describe the investment objective(s), structure, payoffs, and risks of the following option strategies: bull spread, bear spread, collar, and straddle	
Derivatives	14.42.h	calculate and interpret the value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of the following option strategies: bull spread, bear spread, collar, and straddle	14.41.h	calculate and interpret the value at expiration, profit, maximum profit, maximum loss, and breakeven underlying price at expiration of the following option strategies: bull spread, bear spread, collar, and straddle	
Derivatives	14.42.i	describe uses of calendar spreads	14.41.i	describe uses of calendar spreads	
Derivatives	14.42.j	identify and evaluate appropriate derivatives strategies consistent with given investment objectives	14.41.j	identify and evaluate appropriate derivatives strategies consistent with given investment objectives	
Alternative Investments	15.43.a	classify and describe basic forms of real estate investments	15.42.a	classify and describe basic forms of real estate investments	
Alternative Investments	15.43.b	describe the characteristics, the classification, and basic segments of real estate	15.42.b	describe the characteristics, the classification, and basic segments of real estate	
Alternative Investments	15.43.c	explain the role in a portfolio, economic value determinants, investment characteristics, and principal risks of private real estate	15.42.c	explain the role in a portfolio, economic value determinants, investment characteristics, and principal risks of private real estate	
Alternative Investments	15.43.d	describe commercial property types, including their distinctive investment characteristics	15.42.d	describe commercial property types, including their distinctive investment characteristics	
Alternative Investments	15.43.e	compare the income, cost, and sales comparison approaches to valuing real estate properties	15.42.e	compare the income, cost, and sales comparison approaches to valuing real estate properties	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Alternative Investments	15.43.f	estimate and interpret the inputs (for example, net operating income, capitalization rate, and discount rate) to the direct capitalization and discounted cash flow valuation methods	15.42.f	estimate and interpret the inputs (for example, net operating income, capitalization rate, and discount rate) to the direct capitalization and discounted cash flow valuation methods	
Alternative Investments	15.43.g	calculate the value of a property using the direct capitalization and discounted cash flow valuation methods	15.42.g	calculate the value of a property using the direct capitalization and discounted cash flow valuation methods	
Alternative Investments	15.43.h	compare the direct capitalization and discounted cash flow valuation methods	15.42.h	compare the direct capitalization and discounted cash flow valuation methods	
Alternative Investments	15.43.i	calculate the value of a property using the cost and sales comparison approaches	15.42.i	calculate the value of a property using the cost and sales comparison approaches	
Alternative Investments	15.43.j	describe due diligence in private equity real estate investment	15.42.j	describe due diligence in private equity real estate investment	
Alternative Investments	15.43.k	discuss private equity real estate investment indexes, including their construction and potential biases	15.42.k	discuss private equity real estate investment indexes, including their construction and potential biases	
Alternative Investments	15.43.l	explain the role in a portfolio, the major economic value determinants, investment characteristics, principal risks, and due diligence of private real estate debt investment	15.42.l	explain the role in a portfolio, the major economic value determinants, investment characteristics, principal risks, and due diligence of private real estate debt investment	
Alternative Investments	15.43.m	calculate and interpret financial ratios used to analyze and evaluate private real estate investments	15.42.m	calculate and interpret financial ratios used to analyze and evaluate private real estate investments	
Alternative Investments	15.44.a	describe types of publicly traded real estate securities	15.43.a	describe types of publicly traded real estate securities	
Alternative Investments	15.44.b	explain advantages and disadvantages of investing in real estate through publicly traded securities	15.43.b	explain advantages and disadvantages of investing in real estate through publicly traded securities	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Alternative Investments	15.44.c	explain economic value determinants, investment characteristics, principal risks, and due diligence considerations for real estate investment trust (REIT) shares	15.43.c	explain economic value determinants, investment characteristics, principal risks, and due diligence considerations for real estate investment trust (REIT) shares	
Alternative Investments	15.44.d	describe types of REITs	15.43.d	describe types of REITs	
Alternative Investments	15.44.e	justify the use of net asset value per share (NAVPS) in REIT valuation and estimate NAVPS based on forecasted cash net operating income	15.43.e	justify the use of net asset value per share (NAVPS) in REIT valuation and estimate NAVPS based on forecasted cash net operating income	
Alternative Investments	15.44.f	describe the use of funds from operations (FFO) and adjusted funds from operations (AFFO) in REIT valuation	15.43.f	describe the use of funds from operations (FFO) and adjusted funds from operations (AFFO) in REIT valuation	
Alternative Investments	15.44.g	compare the net asset value, relative value (price-to-FFO and price-to-AFFO), and discounted cash flow approaches to REIT valuation	15.43.g	compare the net asset value, relative value (price-to-FFO and price-to-AFFO), and discounted cash flow approaches to REIT valuation	
Alternative Investments	15.44.h	calculate the value of a REIT share using net asset value, price-to-FFO and price-to-AFFO, and discounted cash flow approaches	15.43.h	calculate the value of a REIT share using net asset value, price-to-FFO and price-to-AFFO, and discounted cash flow approaches	
Alternative Investments	15.45.a	explain sources of value creation in private equity	15.44.a	explain sources of value creation in private equity	
Alternative Investments	15.45.b	explain how private equity firms align their interests with those of the managers of portfolio companies	15.44.b	explain how private equity firms align their interests with those of the managers of portfolio companies	
Alternative Investments	15.45.c	distinguish between the characteristics of buyout and venture capital investments	15.44.c	distinguish between the characteristics of buyout and venture capital investments	
Alternative Investments	15.45.d	describe valuation issues in buyout and venture capital transactions	15.44.d	describe valuation issues in buyout and venture capital transactions	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Alternative Investments	15.45.e	explain alternative exit routes in private equity and their impact on value	15.44.e	explain alternative exit routes in private equity and their impact on value	
Alternative Investments	15.45.f	explain private equity fund structures, terms, valuation, and due diligence in the context of an analysis of private equity fund returns	15.44.f	explain private equity fund structures, terms, valuation, and due diligence in the context of an analysis of private equity fund returns	
Alternative Investments	15.45.g	explain risks and costs of investing in private equity	15.44.g	explain risks and costs of investing in private equity	
Alternative Investments	15.45.h	interpret and compare financial performance of private equity funds from the perspective of an investor	15.44.h	interpret and compare financial performance of private equity funds from the perspective of an investor	
Alternative Investments	15.45.i	calculate management fees, carried interest, net asset value, distributed to paid in (DPI), residual value to paid in (RVPI), and total value to paid in (TVPI) of a private equity fund	15.44.i	calculate management fees, carried interest, net asset value, distributed to paid in (DPI), residual value to paid in (RVPI), and total value to paid in (TVPI) of a private equity fund	
Alternative Investments	15.45.j	calculate pre-money valuation, post-money valuation, ownership fraction, and price per share applying the venture capital method 1) with single and multiple financing rounds and 2) in terms of IRR	15.44.j	calculate pre-money valuation, post-money valuation, ownership fraction, and price per share applying the venture capital method 1) with single and multiple financing rounds and 2) in terms of IRR	
Alternative Investments	15.45.k	demonstrate alternative methods to account for risk in venture capital	15.44.k	demonstrate alternative methods to account for risk in venture capital	
Alternative Investments	15.46.a	compare characteristics of commodity sectors	15.45.a	compare characteristics of commodity sectors	
Alternative Investments	15.46.b	compare the life cycle of commodity sectors from production through trading or consumption	15.45.b	compare the life cycle of commodity sectors from production through trading or consumption	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Alternative Investments	15.46.c	contrast the valuation of commodities with the valuation of equities and bonds	15.45.c	contrast the valuation of commodities with the valuation of equities and bonds	
Alternative Investments	15.46.d	describe types of participants in commodity futures markets	15.45.d	describe types of participants in commodity futures markets	
Alternative Investments	15.46.e	analyze the relationship between spot prices and expected future prices in markets in contango and markets in backwardation	15.45.e	analyze the relationship between spot prices and future prices in markets in contango and markets in backwardation	**Wording Change**
Alternative Investments	15.46.f	compare theories of commodity futures returns	15.45.f	compare theories of commodity futures returns	
Alternative Investments	15.46.g	describe, calculate, and interpret the components of total return for a fully collateralized commodity futures contract	15.45.g	describe, calculate, and interpret the components of total return for a fully collateralized commodity futures contract	
Alternative Investments	15.46.h	contrast roll return in markets in contango and markets in backwardation	15.45.h	contrast roll return in markets in contango and markets in backwardation	
Alternative Investments	15.46.i	describe how commodity swaps are used to obtain or modify exposure to commodities	15.45.i	describe how commodity swaps are used to obtain or modify exposure to commodities	
Alternative Investments	15.46.j	describe how the construction of commodity indexes affects index returns	15.45.j	describe how the construction of commodity indexes affects index returns	
Portfolio Management	16.47.a	explain the importance of the portfolio perspective	16.46.a	explain the importance of the portfolio perspective	
Portfolio Management	16.47.b	describe the steps of the portfolio management process and the components of those steps	16.46.b	describe the steps of the portfolio management process and the components of those steps	
Portfolio Management	16.47.c	explain the role of the investment policy statement in the portfolio management process and describe the elements of an investment policy statement	16.46.c	explain the role of the investment policy statement in the portfolio management process and describe the elements of an investment policy statement	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	16.47.d	explain how capital market expectations and the investment policy statement help influence the strategic asset allocation decision and how an investor’s investment time horizon may influence the investor’s strategic asset allocation	16.46.d	explain how capital market expectations and the investment policy statement help influence the strategic asset allocation decision and how an investor’s investment time horizon may influence the investor’s strategic asset allocation	
Portfolio Management	16.47.e	define investment objectives and constraints and explain and distinguish among the types of investment objectives and constraints	16.46.e	define investment objectives and constraints and explain and distinguish among the types of investment objectives and constraints	
Portfolio Management	16.47.f	contrast the types of investment time horizons, determine the time horizon for a particular investor, and evaluate the effects of this time horizon on portfolio choice	16.46.f	contrast the types of investment time horizons, determine the time horizon for a particular investor, and evaluate the effects of this time horizon on portfolio choice	
Portfolio Management	16.47.g	justify ethical conduct as a requirement for managing investment portfolios	16.46.g	justify ethical conduct as a requirement for managing investment portfolios	
Portfolio Management	16.48.a	describe arbitrage pricing theory (APT), including its underlying assumptions and its relation to multifactor models	16.47.a	describe arbitrage pricing theory (APT), including its underlying assumptions and its relation to multifactor models	
Portfolio Management	16.48.b	define arbitrage opportunity and determine whether an arbitrage opportunity exists	16.47.b	define arbitrage opportunity and determine whether an arbitrage opportunity exists	
Portfolio Management	16.48.c	calculate the expected return on an asset given an asset’s factor sensitivities and the factor risk premiums	16.47.c	calculate the expected return on an asset given an asset’s factor sensitivities and the factor risk premiums	
Portfolio Management	16.48.d	describe and compare macroeconomic factor models, fundamental factor models, and statistical factor models	16.47.d	describe and compare macroeconomic factor models, fundamental factor models, and statistical factor models	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	16.48.e	explain sources of active risk and interpret tracking risk and the information ratio	16.47.e	explain sources of active risk and interpret tracking risk and the information ratio	
Portfolio Management	16.48.f	describe uses of multifactor models and interpret the output of analyses based on multifactor models	16.47.f	describe uses of multifactor models and interpret the output of analyses based on multifactor models	
Portfolio Management	16.48.g	describe the potential benefits for investors in considering multiple risk dimensions when modeling asset returns	16.47.g	describe the potential benefits for investors in considering multiple risk dimensions when modeling asset returns	
Portfolio Management	16.49.a	explain the use of value at risk (VaR) in measuring portfolio risk	16.48.a	explain the use of value at risk (VaR) in measuring portfolio risk	
Portfolio Management	16.49.b	compare the parametric (variance–covariance), historical simulation, and Monte Carlo simulation methods for estimating VaR	16.48.b	compare the parametric (variance–covariance), historical simulation, and Monte Carlo simulation methods for estimating VaR	
Portfolio Management	16.49.c	estimate and interpret VaR under the parametric, historical simulation, and Monte Carlo simulation methods	16.48.c	estimate and interpret VaR under the parametric, historical simulation, and Monte Carlo simulation methods	
Portfolio Management	16.49.d	describe advantages and limitations of VaR	16.48.d	describe advantages and limitations of VaR	
Portfolio Management	16.49.e	describe extensions of VaR	16.48.e	describe extensions of VaR	
Portfolio Management	16.49.f	describe sensitivity risk measures and scenario risk measures and compare these measures to VaR	16.48.f	describe sensitivity risk measures and scenario risk measures and compare these measures to VaR	
Portfolio Management	16.49.g	demonstrate how equity, fixed-income, and options exposure measures may be used in measuring and managing market risk and volatility risk	16.48.g	demonstrate how equity, fixed-income, and options exposure measures may be used in measuring and managing market risk and volatility risk	
Portfolio Management	16.49.h	describe the use of sensitivity risk measures and scenario risk measures	16.48.h	describe the use of sensitivity risk measures and scenario risk measures	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	16.49.i	describe advantages and limitations of sensitivity risk measures and scenario risk measures	16.48.i	describe advantages and limitations of sensitivity risk measures and scenario risk measures	
Portfolio Management	16.49.j	describe risk measures used by banks, asset managers, pension funds, and insurers	16.48.j	describe risk measures used by banks, asset managers, pension funds, and insurers	
Portfolio Management	16.49.k	explain constraints used in managing market risks, including risk budgeting, position limits, scenario limits, and stop-loss limits	16.48.k	explain constraints used in managing market risks, including risk budgeting, position limits, scenario limits, and stop-loss limits	
Portfolio Management	16.49.l	explain how risk measures may be used in capital allocation decisions	16.48.l	explain how risk measures may be used in capital allocation decisions	
Portfolio Management	17.50.a	explain the notion that to affect market values, economic factors must affect one or more of the following: 1) default-free interest rates across maturities, 2) the timing and/or magnitude of expected cash flows, and 3) risk premiums	17.49.a	explain the notion that to affect market values, economic factors must affect one or more of the following: 1) default-free interest rates across maturities, 2) the timing and/or magnitude of expected cash flows, and 3) risk premiums	
Portfolio Management	17.50.b	explain the role of expectations and changes in expectations in market valuation	17.49.b	explain the role of expectations and changes in expectations in market valuation	
Portfolio Management	17.50.c	explain the relationship between the long-term growth rate of the economy, the volatility of the growth rate, and the average level of real short-term interest rates	17.49.c	explain the relationship between the long-term growth rate of the economy, the volatility of the growth rate, and the average level of real short-term interest rates	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	17.50.d	explain how the phase of the business cycle affects policy and short-term interest rates, the slope of the term structure of interest rates, and the relative performance of bonds of differing maturities	17.49.d	explain how the phase of the business cycle affects policy and short-term interest rates, the slope of the term structure of interest rates, and the relative performance of bonds of differing maturities	
Portfolio Management	17.50.e	describe the factors that affect yield spreads between non-inflation-adjusted and inflation-indexed bonds	17.49.e	describe the factors that affect yield spreads between non-inflation-adjusted and inflation-indexed bonds	
Portfolio Management	17.50.f	explain how the phase of the business cycle affects credit spreads and the performance of credit-sensitive fixed-income instruments	17.49.f	explain how the phase of the business cycle affects credit spreads and the performance of credit-sensitive fixed-income instruments	
Portfolio Management	17.50.g	explain how the characteristics of the markets for a company’s products affect the company’s credit quality	17.49.g	explain how the characteristics of the markets for a company’s products affect the company’s credit quality	
Portfolio Management	17.50.h	explain how the phase of the business cycle affects short-term and long-term earnings growth expectations	17.49.h	explain how the phase of the business cycle affects short-term and long-term earnings growth expectations	
Portfolio Management	17.50.i	explain the relationship between the consumption-hedging properties of equity and the equity risk premium	17.49.i	explain the relationship between the consumption-hedging properties of equity and the equity risk premium	
Portfolio Management	17.50.j	describe cyclical effects on valuation multiples	17.49.j	describe cyclical effects on valuation multiples	
Portfolio Management	17.50.k	describe the implications of the business cycle for a given style strategy (value, growth, small capitalization, large capitalization)	17.49.k	describe the implications of the business cycle for a given style strategy (value, growth, small capitalization, large capitalization)	
Portfolio Management	17.50.l	describe how economic analysis is used in sector rotation strategies	17.49.l	describe how economic analysis is used in sector rotation strategies	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	17.50.m	describe the economic factors affecting investment in commercial real estate	17.49.m	describe the economic factors affecting investment in commercial real estate	
Portfolio Management	17.51.a	describe how value added by active management is measured	17.50.a	describe how value added by active management is measured	
Portfolio Management	17.51.b	calculate and interpret the information ratio (ex post and ex ante) and contrast it to the Sharpe ratio	17.50.b	calculate and interpret the information ratio (ex post and ex ante) and contrast it to the Sharpe ratio	
Portfolio Management	17.51.c	state and interpret the fundamental law of active portfolio management including its component terms—transfer coefficient, information coefficient, breadth, and active risk (aggressiveness)	17.50.c	state and interpret the fundamental law of active portfolio management including its component terms—transfer coefficient, information coefficient, breadth, and active risk (aggressiveness)	
Portfolio Management	17.51.d	explain how the information ratio may be useful in investment manager selection and choosing the level of active portfolio risk	17.50.d	explain how the information ratio may be useful in investment manager selection and choosing the level of active portfolio risk	
Portfolio Management	17.51.e	compare active management strategies (including market timing and security selection) and evaluate strategy changes in terms of the fundamental law of active management	17.50.e	compare active management strategies (including market timing and security selection) and evaluate strategy changes in terms of the fundamental law of active management	
Portfolio Management	17.51.f	describe the practical strengths and limitations of the fundamental law of active management	17.50.f	describe the practical strengths and limitations of the fundamental law of active management	
Portfolio Management	17.52.a	define algorithmic trading	17.51.a	define algorithmic trading	
Portfolio Management	17.52.b	distinguish between execution algorithms and high-frequency trading algorithms	17.51.b	distinguish between execution algorithms and high-frequency trading algorithms	
Portfolio Management	17.52.c	describe types of execution algorithms and high-frequency trading algorithms	17.51.c	describe types of execution algorithms and high-frequency trading algorithms	

Topic	LOS	Level II - 2018 (465 LOS)	LOS	Level II - 2019 (471 LOS)	Compared
Portfolio Management	17.52.d	describe market fragmentation and its effects on how trades are placed	17.51.d	describe market fragmentation and its effects on how trades are placed	
Portfolio Management	17.52.e	describe the use of technology in risk management and regulatory oversight	17.51.e	describe the use of technology in risk management and regulatory oversight	
Portfolio Management	17.52.f	describe issues and concerns related to the impact of algorithmic and high-frequency trading on securities markets	17.51.f	describe issues and concerns related to the impact of algorithmic and high-frequency trading on securities markets	