

## FRM 2019 Part I Exam Review

Date	Location	Correction
22-Jan-2019	Hull, Chapter 13: Question pq.vrm.binom.tree.0040e	Second option correction: "The risk-free rate used by Albert was <b>higher</b> " Answer text correction: "if Albert used a <b>higher</b> rate, then the put price would be lower than \$2.25, and closer to <b>the price that we computed using the binomial model.</b> "
22-Jan-2019	Hull, Options, Chapter 1: Question pq.fmp.chap.intro.00570	Question text correction: "Given that the stock price <b>falls</b> to \$47 at maturity..." Correct answer: <b>-\$3.00</b>
22-Jan-2019	Hull, Options, Chapter 1: Question pq.fmp.chap.intro.00390	Correct answer: <b>\$3</b>
22-Jan-2019	Bodie, Chapter 10: Question pq.frm.inves.10.edit.00580	Correct answer is the option that begins with "That capital markets are perfectly competitive, that investors always prefer more wealth to less wealth with certainty, and that the stochastic process..."
22-Jan-2019	Hull, Chapter 15: Study text, Section: "Learning objective: Compute the value of a European option using the Black-Scholes-Merton model on a nondividend paying stock."	Equation corrected: $c = S_0N(d_1) - Ke^{-rt}N(d_2)$ $p = Ke^{-rt}N(-d_2) - S_0N(-d_1)$
22-Jan-2019	Tuckman, Chapter 5: Question pq.vrm.mult.fact.risk.00560	Correct answer: <b>14 bps</b>
15-Jan-2019	Hull, Options, Chapter 4: Question pq.fmp.interaset.rates.00470	Correct answer: "Short-term interest rates are expected to fall."
3-Mar-2019	Stock, Chapter 4: Study text	Equation at end of "Example 4: Calculating the Coefficient of Determination" replaced: $R^2 = \frac{\text{Total variation} - \text{Unexplained variation}}{\text{Total variation}} = \frac{0.003094 - 0.000259}{0.003094} = 0.9162 \text{ or } 91.62\%$
27-Mar-2019	Hull, Options, Chapter 5: Question pq.fmp.det.forw.fut.00710	Question was removed, as the formula used is outdated.
27-Mar-2019	Hull, Options, Chapter 1: Question pq.fmp.chap.intro.00620	Text in the rationale of the correct option after the sentence that ends "... over the next 90 days." is removed.

23-Aug-2019	Hull, Options, Chapter 1: pq.fmp.chap.intro.00630	<p>New Question: An investment manager enters into an FRA which begins in 60 days and covers a period of 150 days. The FRA that investment manager has most likely committed to is:</p> <p>New Rationale: The FRA begins in 60 days, i.e., 2 months from now and covers a period of 150 days, i.e., 5 months, which means the FRA ends in 7 months from now. Therefore, the correct FRA quote given the scenario is: 2 x 7 FRA.</p>
23-Aug-2019	Hull, Options, Chapter 7: pq.fmp.swaps.00330	<p>Replace text in rationale:</p> <p><del>Swap value as two bond positions: 7.5 million <math>e^{-0.0075}</math> + 507.5 million <math>e^{-0.10 \times 2}</math> = \$7,443,960 + \$497,450,826 = \$500 million - \$504.89 million notional equals \$-4.89 million valuation.</del></p> <p>Value of the swap = Value of floating rate bond - Value of the fixed rate bond  <math>= \\$500 \text{ million} - [\\$7.5 \text{ million} \times e^{-0.0075} + (\\$507.5 \text{ million} \times e^{-0.01 \times 2})]</math>  <math>= \\$500 \text{ million} - (\\$7.44 \text{ million} + \\$497.45 \text{ million})</math>  <math>= \\$500 \text{ million} - \\$504.89 = -\\$4.89 \text{ million}</math></p> <p><del>\$9.89 million would be the answer you got if you forgot to compound the second year cash flow.</del></p>
27 Aug 2019	Hull, Chapter 13: pq.vrm.binom.tree.00580	<p>Correct answer: 51.25%.</p> <p>Revised rationale: Probability of going up  <math>= (e^{rT} - d)/(u - d)</math>  <math>= [e^{(0.01 \times 0.5)} - 0.8]/(1.2 - 0.8)</math>  <math>= 0.5125</math> or 51.25%</p>
27 Aug 2019	Hull, Risk, Chapter 2: Learning objective: Distinguish between economic capital and regulatory capital.	Economic capital is based on internal modeling and is what the bank thinks it needs to survive the worst-case scenarios based on its individual business model and is often <del>more</del> less than regulatory capital.

2 Oct 2019	Hull, Options, Chapter 1 > pq.fmp.chap.intro.00630	<p><i>Replace question text:</i>  <i>An investment manager enters into an FRA which begins in 60 days and covers a period of 150 days. The FRA that investment manager has most likely committed to is:</i></p> <p><i>Replace answer rationale:</i>  <i>The FRA begins in 60 days, i.e., 2 months from now and covers a period of 150 days, i.e., 5 months, which means the FRA ends in 7 months from now. Therefore, the correct FRA quote given the scenario is: 2 x 7 FRA.</i></p>
2 Oct 2019	Hull, Options, Chapter 1 > pq.fmp.chap.intro.00540	<p><i>Correct answer:</i>  <b>\$6.79</b></p> <p><i>Replace answer rationale:</i>  <i>At time <math>t &lt; T</math>, the value of the short position on a forward contract = Present value of the forward price at time <math>t</math> - Spot price at time <math>t</math></i>  <i>Here,</i>  <i>Forward price = <math>\\$150 \times e^{(0.05925 \times 6/12)} = \\$154.51</math></i>  <i>Present value of forward price at time <math>t</math></i>  <i>= <math>\\$154.51 \times e^{-0.05925 \times (6/12 - 3/12)} = \\$152.24</math></i>  <i>Therefore,</i>  <i>Value of the short position at time <math>t = \\$152.24 - \\$145.45 = \\$6.79</math></i></p>
7 Oct 2019	Hull, Risk, Chapter 2 > Study Text under "Distinguish between economic capital and regulatory capital."	Economic capital is based on internal modeling and is what the bank thinks it needs to survive the worst-case scenarios based on its individual business model and is often <del>more</del> <b>less</b> than regulatory capital.
21 Oct 2019	Hull, Options, Chapter 5 > pq.vrm.det.forw.fut.0030	<p><i>Answer rationale:</i>  <math>2039e^{(0.12 - 0.012 - 0.03)(.5)} = 2020.73</math></p>
6 Nov 2019	Fabozzi, Chapter 12 > pq.fmp.hndbk.fix.inc.10001	<p><i>Question Text:</i>  What is the <b>primary</b> role of an indenture of a bond?</p> <p><i>Rationale:</i>  <del>It may surprise you that the coupon details are not in the indenture of a bond.</del> If the bond has coupons, the bond indenture will specify where the coupons can be presented for payment. But this is not the primary role of the bond indenture.</p>

6 Nov 2019	Allen, Chapter 2 > Study Text under "Learning objective: Calculate conditional volatility with and without mean reversion."	<i>Equation Corrected:</i> If we have a two period return, we can consider a single period conditional variance of the rate of change as: $\text{var}_t(X_{t+2} - X_t) = \text{var}_t(a(1+b) + (b-1)X_t + \text{bet}_{t+1} + \text{et}_{t+2})$
27 Nov 2019	Hull, Chapter 13 > pq.vrm.binom.tree.00350	<i>Question Text:</i> You would like to calculate the value of an option using an option-pricing model and a binomial model. You have gathered the following information: Risk-free rate: 3.00% ; ABC stock price: \$40.00 ; Strike price: \$45.00 ; Movement up: 20% ; Movement down: 15%. Calculate the value of the possible call option prices at expiration for a two-period binomial tree.  <i>Rationale:</i> StockUpUp = \$40.00 × 1.20 <sup>2</sup> = \$40.00 × 1.44 = \$57.60 ... StockDnDn = \$40.00 × 0.85 <sup>2</sup> = \$40.00 × 0.72250 = \$28.90
2 Jan 2020	Fabozzi, Chapter 12 > pq.fmp.hndbk.fix.inc.10004	<i>Question Text:</i> Which of the following statements is <del>not true</del> <b>TRUE</b> about zero-coupon bonds? ...  If investors are anticipating a cash shortfall by the issuer, the zero-coupon bond is <b>NOT</b> safer <del>safer</del> than a bond that requires cash for coupon payments.

## FRM 2019 Part II Exam Review

Date	Location	Correction
28 Aug 2019	Gregory, Chapter 4 Study Text, under heading "Describe credit value adjustment (CVA) and compare the use of CVA and credit limits in evaluating and mitigating counterparty risk."	<del>So if I told you the credit spreads were 500 basis points and recovery was 25%, then 500/25 = 20% hazard rate or conditional default rate,</del> If credit spread is 5% and recovery rate is 75%, hazard rate or conditional default rate equals: $0.05/(1 - 0.75) = 0.2$ or 20%, which is the same as what I gave you in the previous example.
20 Sep 2019	FRM Part 2 > Hull, Chapter 20 pq.mr.vol.smile.10107	<i>Third answer option:</i> Vega is <del>negative</del> <b>positive</b>

2 Oct 2019	FRM Part 2 > Cruz, Chapter 2 > pq.or.fund.aspect.oper.10027	<i>Question text:</i> Which of the following 4 types is <del>correctly paired with the right definition</del> <b>incorrectly defined?</b>
2 Oct 2010	Gregory, Chapter 17 > pq.cr.wrong.way.005_1712_EP	<i>Correct answer is:</i> <b>Wrong-way risk increases with decreasing credit quality.</b>
7 Oct 2019	Gregory, Chapter 14 Study Text, under heading "Calculate CVA and the CVA spread with no wrong-way risk, netting, or collateralization.	<del>So if I told you the credit spreads were 500 basis points and recovery was 25%, then <math>500/25 = 20\%</math> hazard rate or conditional default rate,</del> <b>If credit spread is 5% and recovery rate is 75%, hazard rate or conditional default rate equals: <math>0.05/(1 - 0.75) = 0.2</math> or 20%, which is the same as what I gave you in the previous example.</b>
7 Oct 2019	Dowd, Chapter 3 > pq.qa.hypo.test.conf.00730	<i>Correct answer:</i> <b>\$3,980, 017</b>
6 Nov 2019	Gregory Chapter 17 > pq.cr.wrong.way.10110	<i>Question Option:</i> Wrong-way risk: Enter into a <del>receive</del> <b>pay</b> -fixed oil swap where the underlying is the price of oil and the counterparty is an oil company.
6 Nov 2019	Tuckman, Chapter 8 > pq.mr.evol.short.rat.10086	<i>Question Text:</i> Given that the 1-year spot rate is 4% and the 2-year spot rate is 4.5%, which of the bonds is most likely <del>underpriced</del> <b>overpriced?</b>  <i>Correct Answer:</i> <b>Bond A</b> <del>Bond C</del>