Multiple Annuity Starting Dates

- MASDs: multiple distributions counting against §415
  - In-service distributions
  - Prior plans that were terminated
  - §401(a)(9) payments
  - §415 COLA adjustments to benefits in pay status
  - Payments to alternate payees
  - Top 25 restrictions under §1.401(a)(4)-5
  - Participants in multi-employer and single-employer plans
  - Lump sums to retirees at plan termination
  - Bifurcated benefits resulting from §436 restrictions

MASDs and §415

- §415 Regulations:
  - "Reserved"
  - Preamble: "The benefit payable at each annuity starting date must comply with §415 when aggregated with all past payments."
  - §415 regulations introduce concept of MASDs, but give little guidance
§401(a)(9) Regs & MASDs
• Several examples demonstrate valuable concepts in order to comply with §§401(a)(9) and 415
• §401(a)(9) regulation is the only §415 MASD guidance:
  • Any modification of a payment stream is treated as a new annuity starting date for §415 and 417
  • Entire payment stream (including modifications, such as lump sum, that constitutes the additional ASDs) must satisfy §415 as of each ASD both with and without aggregating past ASDs
  • Valuing income streams for compliance with §415 should use 5.5% interest
  • Where benefits are not based on mortality, should not use mortality in valuing income streams

MASD Methodology
Specific Methodology
1. Discount revised annuity stream (which includes all payments related to all ASDs) to First ASD
   • for payments not subject to §417(e)(3) or would be if the plan was not an applicable plan, discount at 5.0% (or plan rate, if higher)
   • for payments subject to §417(e)(3) or would be if the plan was not an applicable plan, discount at 5.5% (or plan rate or adjusted applicable interest rates, if higher)
   • Use rates applicable to the ASD being tested
   • If payments subject to life contingencies, use AMT
2. Convert discounted PV to a hypothetical life annuity at 1st ASD
3. Compare resultant hypothetical annuity with §415 limit as of 1st ASD
4. Discount annuity stream payable at 2nd ASD to 2nd ASD
   • Same rules for setting discount rate(s) and mortality as in (1)
5. Convert discounted PV to life annuity at 2nd ASD
6. Compare resultant hypothetical annuity with §415 limit as of 2nd ASD
7. Repeat steps (4), (5), and (6) for 3rd and later ASDs, if any
8. Benefit must meet §415 at all ASDs without regard to prior payments
9. Finally sum the present values as of the 1st annuity starting date
Example 1

- Ted’s 415 average compensation is $140,000
- Ted elected to take a life annuity of $120,000 payable annually
- Five years later, the plan terminates and Ted elects to take a lump sum of the remaining payments.
- His revised income stream at 1st Annuity Starting Date (ASD) is:
  - Life annuity for 5 years, plus
  - Lump sum of the maximum permissible lump sum at the 6th year
- Since the revised income stream was based on life contingencies, discount for interest and the AMT

<table>
<thead>
<tr>
<th>Ages</th>
<th>Amount Paid</th>
<th>Discounted Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>120,000</td>
<td>120,000</td>
</tr>
<tr>
<td>71</td>
<td>120,000</td>
<td>112,014</td>
</tr>
<tr>
<td>72</td>
<td>120,000</td>
<td>104,404</td>
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<tr>
<td>74</td>
<td>120,000</td>
<td>90,169</td>
</tr>
<tr>
<td>75</td>
<td>1,139,467</td>
<td>754,717</td>
</tr>
<tr>
<td>Totals</td>
<td>1,739,467</td>
<td>1,316,676</td>
</tr>
</tbody>
</table>

*Discounted at 5.5% and the 2015 Applicable Mortality Table

Example 1

- At 1st ASD annual benefit derived from present value of revised income stream:
  $$1,316,676 \div 127.67 \text{ (2015 AMT)} \times 12 = 128,551$$
- At 2nd ASD: benefit provided by lump sum at age 75:
  $$1,139,467 \div 113.95 \text{ (2020 AMT)} \times 12 = 120,000$$
- Since $128,551 and $120,000 are less than Ted's $415 average compensation of $140,000 therefore the payment streams meet §415 at both ASDs and may be paid.
- By using the 2020 mortality table for the lump sum, the income stream reflects a benefit increase
Example 2

- Mike’s 415 average compensation is $120,000
- Mike elected to take a monthly life annuity of $10,000 starting in 2015
- Five years later, the plan terminates and Mike elects to take a lump sum of the remaining payments.
- His revised income stream at 1st Annuity Starting Date (ASD) is:
  - Life annuity for 5 years, plus
  - Lump sum of the maximum permissible lump sum at the 6th year
- Since the revised income stream was based on life contingencies, discount for interest and the AMT

### Payment Table

<table>
<thead>
<tr>
<th>Ages</th>
<th>Amount Paid</th>
<th>Discounted Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>120,000</td>
<td>116,341</td>
</tr>
<tr>
<td>71</td>
<td>120,000</td>
<td>108,528</td>
</tr>
<tr>
<td>72</td>
<td>120,000</td>
<td>101,067</td>
</tr>
<tr>
<td>73</td>
<td>120,000</td>
<td>93,935</td>
</tr>
<tr>
<td>74</td>
<td>120,000</td>
<td>87,118</td>
</tr>
<tr>
<td>75</td>
<td>1,027,000</td>
<td>1219,711</td>
</tr>
<tr>
<td>Totals</td>
<td>1,627,000</td>
<td>1,219,711</td>
</tr>
</tbody>
</table>

*5.5% and 2015 AMT

Example 2

- At 1st ASD annual benefit derived from present value of revised income stream:
  \[ \frac{1,219,711}{122.17} \times 12 = 119,805 \]
- At 2nd ASD: benefit provided by lump sum at age 75:
  \[ \frac{1,027,000}{102.70} \times 12 = 120,000 \]
- The revised income stream meets the requirements of §415 for the combined value at ASD 1 and 2, and separately at ASD 2.
Example 3
• Mary Ann has a $210,000 accrued benefit
  • She retires at age 62 with $17,500 monthly payments. Assume this to be the §415 limit
  • At age 64, she’s rehired and her benefit is suspended
  • She re-retires at age 65 after having one year’s payments suspended

• Offset for payments prior to age 65?
  • The value of Mary Ann’s expected annuity stream (before suspension) starting at age 62 is $17,500 x 149.58 = 2,617,650 (ASD 1)
  • The value of the revised income stream is 17,500 x 1.8903 x 12 + 17,500 x 139.76 x 0.833389 = 2,435,266 (ASD 2)
  • The value of the revised income stream is less than the value of the original income stream. Therefore there is no reason to reduce Mary Ann’s future benefits

• 2015 AMT at 5.5%

Example 4
• Jim’s benefit at age 65 is his §415 compensation of 218,280. Jim has elected a 10 year term certain with annual benefit increases of 4.99%. The value of the income stream is 2,542,050. The income stream is as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>Payments</th>
<th>Age</th>
<th>Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>249,674</td>
<td>70</td>
<td>331,259</td>
</tr>
<tr>
<td>66</td>
<td>272,631</td>
<td>71</td>
<td>347,789</td>
</tr>
<tr>
<td>67</td>
<td>286,236</td>
<td>72</td>
<td>365,143</td>
</tr>
<tr>
<td>68</td>
<td>300,519</td>
<td>73</td>
<td>383,364</td>
</tr>
<tr>
<td>69</td>
<td>315,515</td>
<td>74</td>
<td>402,494</td>
</tr>
</tbody>
</table>

5.5% no mortality

Example 4
• After 4 payments, the plan terminates and Jim’s decides to take a lump sum benefit
  • The value of his §415 limit at age 65 is $2,452,050 (2015 AMT). Ignoring prior payments, the value of his §415 limit at age 69 is $2,288,907. Is this the amount that may be paid?
**Example 4**

1. A payment of 2,288,907 revises the income stream as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>Payment</th>
<th>PV (5.5% No Mortality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>259,674</td>
<td>259,674</td>
</tr>
<tr>
<td>66</td>
<td>272,631</td>
<td>258,443</td>
</tr>
<tr>
<td>67</td>
<td>286,236</td>
<td>257,218</td>
</tr>
<tr>
<td>68</td>
<td>300,519</td>
<td>255,999</td>
</tr>
<tr>
<td>69</td>
<td>2,288,907</td>
<td>1,847,644</td>
</tr>
<tr>
<td>Total</td>
<td>3,407,967</td>
<td>2,878,978</td>
</tr>
</tbody>
</table>

The value of the revised income stream exceeds §415 when ASD 1 and ASD 2 are combined.

**Example 4**

1. One approach would be to reduce the lump sum so that the revised income stream is the same value as the original income stream. A payment of 1,760,018 revises the income stream as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>Payment</th>
<th>PV (5.5% No Mortality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>259,674</td>
<td>259,674</td>
</tr>
<tr>
<td>66</td>
<td>272,631</td>
<td>258,443</td>
</tr>
<tr>
<td>67</td>
<td>286,236</td>
<td>257,218</td>
</tr>
<tr>
<td>68</td>
<td>300,519</td>
<td>255,999</td>
</tr>
<tr>
<td>69</td>
<td>1,760,018</td>
<td>1,420,716</td>
</tr>
<tr>
<td>Total</td>
<td>2,879,078</td>
<td>2,452,050</td>
</tr>
</tbody>
</table>

**Example 5-Use it or Lose it**

1. Harry’s §415 compensation is 120,000. He retires at age 60 with a $10,000 monthly life annuity.
2. At age 65, he is reemployed for one year and given a suspension of benefit notice.
3. He resumes his annuity at age 66 and wants an actuarial increase to the remaining payments.
4. He cannot receive an increase. §415 at the 1st ASD would show the revised income stream would comply with §415.
5. Without any calculations the increase would violate §415 at the 2nd ASD.
Cash Balance Plans

• The accrued benefit payable at NRA is calculated by increasing the current account balance at the current interest crediting rate to the participant’s Normal Retirement Age
• All compliance testing is done on the accrued benefit payable at NRA
• Then using the plan’s definition of actuarial equivalency, the projected account balance is converted into an annuity commencing at Normal Retirement Age

Cash Balance Plan Equity Rates of Return

• NRA 62. Participant is age 55 on 1/1/2020 after 10 years of participation. AE is ICR/5½% AMT
• Account balance after posting an estimated 2019 interest credit of 5% is $1,500,000
• Is the account balance payable as a lump sum?
• Max benefit at 55: $19,167 \times \frac{a_{62|5\frac{1}{2}}}{1.05^7} = $11,856
• Max Lump Sum $12,120 \times \frac{a_{55|5\frac{1}{2}}}{1.05^7} = $2,095,380
• Plan may pay the account balance

Cash Balance Plan Equity Rates of Return

• Same example but the actual 2019 interest credit is 15%. Account balance is now $1,642,857. AE is ICR/5½% AMT
• Is the account balance payable as a lump sum?
• Max benefit at 55: $19,167 \times \frac{a_{62|5\frac{1}{2}}}{1.15^7} = $6,411
• Max lump sum is $1,108,417. Plan cannot pay the entire account balance
• The creative consultant says, “The good news is the plan’s assets yielded 15%. The bad news is the plan’s assets yielded 15%.”
What is the Impact of High Interest Crediting Rates on Maximum Lump Sums?

• When this is applied to a cash balance plan with a high interest crediting rate, the result can be shocking

• Following are the results for a plan that uses 5½% interest and the Applicable Mortality Table to convert the account to an annuity with interest crediting rates of 5%, 7.5%, 10% and 15%, 10 years of participation and service are assumed to have been earned.

### Maximum Annuity Benefits with Various Interest Crediting Rates

<table>
<thead>
<tr>
<th>Age</th>
<th>5.00%</th>
<th>7.50%</th>
<th>10.00%</th>
<th>15.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>2,951</td>
<td>1,390</td>
<td>666</td>
<td>161</td>
</tr>
<tr>
<td>40</td>
<td>5,041</td>
<td>3,004</td>
<td>1,812</td>
<td>681</td>
</tr>
<tr>
<td>50</td>
<td>8,924</td>
<td>6,728</td>
<td>5,106</td>
<td>2,995</td>
</tr>
<tr>
<td>60</td>
<td>16,749</td>
<td>15,979</td>
<td>15,261</td>
<td>13,963</td>
</tr>
<tr>
<td>62</td>
<td>19,167</td>
<td>19,167</td>
<td>19,167</td>
<td>19,167</td>
</tr>
</tbody>
</table>

### Maximum Lump Sum Benefits with Various Interest Crediting Rates

<table>
<thead>
<tr>
<th>Age</th>
<th>5.00%</th>
<th>7.50%</th>
<th>10.00%</th>
<th>15.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>618,772</td>
<td>291,419</td>
<td>139,643</td>
<td>33,672</td>
</tr>
<tr>
<td>40</td>
<td>1,007,914</td>
<td>600,622</td>
<td>362,199</td>
<td>136,219</td>
</tr>
<tr>
<td>50</td>
<td>1,641,784</td>
<td>1,237,902</td>
<td>939,453</td>
<td>551,079</td>
</tr>
<tr>
<td>60</td>
<td>2,674,294</td>
<td>2,551,354</td>
<td>2,436,702</td>
<td>2,229,421</td>
</tr>
<tr>
<td>62</td>
<td>2,948,409</td>
<td>2,948,409</td>
<td>2,948,409</td>
<td>2,948,409</td>
</tr>
</tbody>
</table>
What is the Impact of High Interest Crediting Rates on Maximum Lump Sums?

• As can be seen, in the situation of an interest crediting rate of 15%, the age 50 maximum lump sum decreases from $1,641,258 to $551,079, which is a reduction of about 33%

• For a plan where owners are near the §415 limit, while the account balance would be near contributions plus interest, the lump sum would be significantly lower than the account balance, defeating the intent of the interest crediting rate

What is the Impact of Low Interest Crediting Rates on benefits?

• If the ICR is 0%, then the §415 limit at ages less than 62 is reduced by the §415 interest rate of 5%

• If the ICR is negative, then the account balance reflects the reduced account balance and the accrued benefit payable at NRA is the same as if the ICR is 0%

§401(a)(26)

• In 2018, participant’s account balance is $20,000 at age 30. ICR was 6%. This equates to a monthly benefit of $839

• In 2019, at age 31, the account balance is now $21,600 with an ICR of 3%. This equates to a monthly benefit at NRA of $351.

• To comply with §401(a)(26), the account balance might have to be increased.

• In a conversation with an actuary who does a lot of cash balance plans with variable ICRs, he designs the staff pay credits on the basis of a 0% ICR
Consulting Issues

- Variable ICRs may not result in account balances being the actual amounts paid.
- §415 limits may reduce actual payment when returns are high
- Preservation of capital may increase actual payments when investment returns are negative
- §411 requires actuarial increases for participant over NRA or 72 to be based on reasonable actuarial equivalency. A low ICR may not comply with this requirement.
- Many plans are designed to have a minimum and a maximum ICR to limit issues with §§411, 401(a)(26) and 415