| SURVIVOR CURVE.. IOWA 75-S4 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1926 | 18,529.30 |  | 75.00 |  | 1.33 |  | 246.44 |  | 5.12 |  | 0.9317 |  | 17,264 |  |
| 1928 | 1,078.88 |  | 75.00 |  | 1.33 |  | 14.35 |  | 5.49 |  | 0.9268 |  | 1,000 |  |
| 1929 | 20,518.58 |  | 75.00 |  | 1.33 |  | 272.90 |  | 5.68 |  | 0.9243 |  | 18,965 |  |
| 1930 | 17,060.28 |  | 75.00 |  | 1.33 |  | 226.90 |  | 5.89 |  | 0.9215 |  | 15,721 |  |
| 1934 | 103.45 |  | 75.00 |  | 1.33 |  | 1.38 |  | 6.76 |  | 0.9099 |  | 94 |  |
| 1939 | 16,646.96 |  | 75.00 |  | 1.33 |  | 221.40 |  | 8.05 |  | 0.8927 |  | 14,860 |  |
| 1942 | 36,345.04 |  | 75.00 |  | 1.33 |  | 483.39 |  | 8.94 |  | 0.8808 |  | 32,013 |  |
| 1943 | 47,827.40 |  | 75.00 |  | 1.33 |  | 636.10 |  | 9.26 |  | 0.8765 |  | 41,922 |  |
| 1944 | 35,762.61 |  | 75.00 |  | 1.33 |  | 475.64 |  | 9.59 |  | 0.8721 |  | 31,190 |  |
| 1945 | 6,582.41 |  | 75.00 |  | 1.33 |  | 87.55 |  | 9.94 |  | 0.8675 |  | 5,710 |  |
| 1946 | 5,655.50 |  | 75.00 |  | 1.33 |  | 75.22 |  | 10.30 |  | 0.8627 |  | 4,879 |  |
| 1947 | 73,044.73 |  | 75.00 |  | 1.33 |  | 971.49 |  | 10.68 |  | 0.8576 |  | 62,643 |  |
| 1948 | 13,995.77 |  | 75.00 |  | 1.33 |  | 186.14 |  | 11.07 |  | 0.8524 |  | 11,930 |  |
| 1949 | 1,347.51 |  | 75.00 |  | 1.33 |  | 17.92 |  | 11.48 |  | 0.8469 |  | 1,141 |  |
| 1950 | 36,868.69 |  | 75.00 |  | 1.33 |  | 490.35 |  | 11.90 |  | 0.8413 |  | 31,019 |  |
| 1951 | 166,604.98 |  | 75.00 |  | 1.33 |  | 2,215.85 |  | 12.34 |  | 0.8355 |  | 139,193 |  |
| 1952 | 419,021.54 |  | 75.00 |  | 1.33 |  | 5,572.99 |  | 12.80 |  | 0.8293 |  | 347,507 |  |
| 1953 | 488,285.90 |  | 75.00 |  | 1.33 |  | 6,494.20 |  | 13.27 |  | 0.8231 |  | 401,893 |  |
| 1954 | 515,066.66 |  | 75.00 |  | 1.33 |  | 6,850.39 |  | 13.76 |  | 0.8165 |  | 420,567 |  |
| 1955 | 697,452.37 |  | 75.00 |  | 1.33 |  | 9,276.12 |  | 14.28 |  | 0.8096 |  | 564,657 |  |
| 1956 | 298,074.06 |  | 75.00 |  | 1.33 |  | 3,964.38 |  | 14.81 |  | 0.8025 |  | 239,213 |  |
| 1957 | 841,466.40 |  | 75.00 |  | 1.33 |  | 11,191.50 |  | 15.37 |  | 0.7951 |  | 669,025 |  |
| 1958 | 642,741.78 |  | 75.00 |  | 1.33 |  | 8,548.47 |  | 15.94 |  | 0.7875 |  | 506,140 |  |
| 1959 | 315,923.99 |  | 75.00 |  | 1.33 |  | 4,201.79 |  | 16.54 |  | 0.7795 |  | 246,253 |  |
| 1960 | 1,833,627.07 |  | 75.00 |  | 1.33 |  | 24,387.24 |  | 17.16 |  | 0.7712 |  | 1,414,093 |  |
| 1961 | 1,324,001.11 |  | 75.00 |  | 1.33 |  | 17,609.21 |  | 17.80 |  | 0.7627 |  | 1,009,776 |  |
| 1962 | 1,235,188.37 |  | 75.00 |  | 1.33 |  | 16,428.01 |  | 18.46 |  | 0.7539 |  | 931,171 |  |
| 1963 | 466,245.78 |  | 75.00 |  | 1.33 |  | 6,201.07 |  | 19.14 |  | 0.7448 |  | 347,260 |  |
| 1964 | 4,103,926.68 |  | 75.00 |  | 1.33 |  | 54,582.22 |  | 19.85 |  | 0.7353 |  | 3,017,740 |  |
| 1965 | 921,859.54 |  | 75.00 |  | 1.33 |  | 12,260.73 |  | 20.58 |  | 0.7256 |  | 668,901 |  |
| 1966 | 2,228,091.47 |  | 75.00 |  | 1.33 |  | 29,633.62 |  | 21.32 |  | 0.7157 |  | 1,594,712 |  |
| 1967 | 1,503,022.09 |  | 75.00 |  | 1.33 |  | 19,990.19 |  | 22.09 |  | 0.7055 |  | 1,060,337 |  |
| 1968 | 2,225,907.33 |  | 75.00 |  | 1.33 |  | 29,604.57 |  | 22.88 |  | 0.6949 |  | 1,546,850 |  |
| 1969 | 4,308,750.53 |  | 75.00 |  | 1.33 |  | 57,306.38 |  | 23.69 |  | 0.6841 |  | 2,947,746 |  |
| 1970 | 3,987,365.94 |  | 75.00 |  | 1.33 |  | 53,031.97 |  | 24.52 |  | 0.6731 |  | 2,683,776 |  |
| 1971 | 386,204.95 |  | 75.00 |  | 1.33 |  | 5,136.53 |  | 25.37 |  | 0.6617 |  | 255,563 |  |
| 1972 | 547,877.96 |  | 75.00 |  | 1.33 |  | 7,286.78 |  | 26.23 |  | 0.6503 |  | 356,269 |  |
| 1973 | 1,434,656.09 |  | 75.00 |  | 1.33 |  | 19,080.93 |  | 27.11 |  | 0.6385 |  | 916,071 |  |
| 1974 | 1,518,077.17 |  | 75.00 |  | 1.33 |  | 20,190.43 |  | 28.01 |  | 0.6265 |  | 951,121 |  |
| 1975 | 2,477,964.02 |  | 75.00 |  | 1.33 |  | 32,956.92 |  | 28.92 |  | 0.6144 |  | 1,522,461 |  |
| 1976 | 5,289,107.20 |  | 75.00 |  | 1.33 |  | 70,345.13 |  | 29.84 |  | 0.6021 |  | 3,184,730 |  |
| 1977 | 1,077,003.37 |  | 75.00 |  | 1.33 |  | 14,324.14 |  | 30.78 |  | 0.5896 |  | 635,001 |  |
| 1978 | 947,047.99 |  | 75.00 |  | 1.33 |  | 12,595.74 |  | 31.72 |  | 0.5771 |  | 546,513 |  |
| 1979 | 1,747,486.11 |  | 75.00 |  | 1.33 |  | 23,241.57 |  | 32.67 |  | 0.5644 |  | 986,281 |  |
| 1980 | 3,430,217.07 |  | 75.00 |  | 1.33 |  | 45,621.89 |  | 33.64 |  | 0.5515 |  | 1,891,662 |  |
| 1981 | 432,062.43 |  | 75.00 |  | 1.33 |  | 5,746.43 |  | 34.60 |  | 0.5387 |  | 232,739 |  |
| 1982 | 7,867,699.12 |  | 75.00 |  | 1.33 |  | 104,640.40 |  | 35.58 |  | 0.5256 |  | 4,135,263 |  |
| 1983 | 6,554,407.89 |  | 75.00 |  | 1.33 |  | 87,173.62 |  | 36.56 |  | 0.5125 |  | 3,359,331 |  |
| 1984 | 2,751,185.27 |  | 75.00 |  | 1.33 |  | 36,590.76 |  | 37.54 |  | 0.4995 |  | 1,374,135 |  |
| 1985 | 78,893.36 |  | 75.00 |  | 1.33 |  | 1,049.28 |  | 38.53 |  | 0.4863 |  | 38,363 |  |
| 1986 | 750.44 |  | 75.00 |  | 1.33 |  | 9.98 |  | 39.52 |  | 0.4731 |  | 355 |  |
| 1987 | 10,027,506.10 |  | 75.00 |  | 1.33 |  | 133,365.83 |  | 40.52 |  | 0.4597 |  | 4,609,945 |  |
| 1988 | 2,404,991.94 |  | 75.00 |  | 1.33 |  | 31,986.39 |  | 41.51 |  | 0.4465 |  | 1,073,901 |  |
| 1989 | 2,672,536.65 |  | 75.00 |  | 1.33 |  | 35,544.74 |  | 42.51 |  | 0.4332 |  | 1,157,743 |  |
| 1990 | 13,415,900.80 |  | 75.00 |  | 1.33 |  | 178,431.48 |  | 43.51 |  | 0.4199 |  | 5,632,934 |  |
| 1991 | 59,669.11 |  | 75.00 |  | 1.33 |  | 793.60 |  | 44.50 |  | 0.4067 |  | 24,266 |  |
| 1992 | 5,261,976.27 |  | 75.00 |  | 1.33 |  | 69,984.28 |  | 45.50 |  | 0.3933 |  | 2,069,693 |  |
| 1993 | 6,314,639.80 |  | 75.00 |  | 1.33 |  | 83,984.71 |  | 46.50 |  | 0.3800 |  | 2,399,563 |  |
| 1994 | 4,778,720.56 |  | 75.00 |  | 1.33 |  | 63,556.98 |  | 47.50 |  | 0.3667 |  | 1,752,213 |  |
| 1995 | 3,395,726.56 |  | 75.00 |  | 1.33 |  | 45,163.16 |  | 48.50 |  | 0.3533 |  | 1,199,812 |  |
| 1996 | 9,759,838.38 |  | 75.00 |  | 1.33 |  | 129,805.85 |  | 49.50 |  | 0.3400 |  | 3,318,345 |  |
| 1997 | 3,712,733.26 |  | 75.00 |  | 1.33 |  | 49,379.35 |  | 50.50 |  | 0.3267 |  | 1,212,839 |  |
| 1998 | 340,743.26 |  | 75.00 |  | 1.33 |  | 4,531.89 |  | 51.50 |  | 0.3133 |  | 106,765 |  |
| 1999 | 1,919,445.10 |  | 75.00 |  | 1.33 |  | 25,528.62 |  | 52.50 |  | 0.3000 |  | 575,834 |  |
| 2000 | 3,743,782.75 |  | 75.00 |  | 1.33 |  | 49,792.31 |  | 53.50 |  | 0.2867 |  | 1,073,230 |  |
| 2001 | 1,068,740.73 |  | 75.00 |  | 1.33 |  | 14,214.25 |  | 54.50 |  | 0.2733 |  | 292,119 |  |
| 2002 | 3,534,837.63 |  | 75.00 |  | 1.33 |  | 47,013.34 |  | 55.50 |  | 0.2600 |  | 919,058 |  |
| 2003 | 1,930,266.99 |  | 75.00 |  | 1.33 |  | 25,672.55 |  | 56.50 |  | 0.2467 |  | 476,139 |  |
| 2004 | 2,270,915.55 |  | 75.00 |  | 1.33 |  | 30,203.18 |  | 57.50 |  | 0.2333 |  | 529,873 |  |
| 2005 | 2,744,844.13 |  | 75.00 |  | 1.33 |  | 36,506.43 |  | 58.50 |  | 0.2200 |  | 603,866 |  |
| 2006 | 8,696,107.88 |  | 75.00 |  | 1.33 |  | 115,658.23 |  | 59.50 |  | 0.2067 |  | 1,797,225 |  |
| 2007 | 20,707,767.63 |  | 75.00 |  | 1.33 |  | 275,413.31 |  | 60.50 |  | 0.1933 |  | 4,003,433 |  |
| 2008 | 20,884,985.17 |  | 75.00 |  | 1.33 |  | 277,770.30 |  | 61.50 |  | 0.1800 |  | 3,759,297 |  |
| 2009 | 776,095.83 |  | 75.00 |  | 1.33 |  | 10,322.07 |  | 62.50 |  | 0.1667 |  | 129,352 |  |
| 2010 | 1,266,002.99 |  | 75.00 |  | 1.33 |  | 16,837.84 |  | 63.50 |  | 0.1533 |  | 194,116 |  |
| 2011 | 91,262.00 |  | 75.00 |  | 1.33 |  | 1,213.78 |  | 64.50 |  | 0.1400 |  | 12,777 |  |
| 2012 | 48,735.72 |  | 75.00 |  | 1.33 |  | 648.19 |  | 65.50 |  | 0.1267 |  | 6,173 |  |
| 2013 | 2,961,260.94 |  | 75.00 |  | 1.33 |  | 39,384.77 |  | 66.50 |  | 0.1133 |  | 335,600 |  |
| 2014 | 49,399.93 |  | 75.00 |  | 1.33 |  | 657.02 |  | 67.50 |  | 0.1000 |  | 4,940 |  |
| 2015 | 29,708.15 |  | 75.00 |  | 1.33 |  | 395.12 |  | 68.50 |  | 0.0867 |  | 2,575 |  |
| 2016 | 5,211,367.79 |  | 75.00 |  | 1.33 |  | 69,311.19 |  | 69.50 |  | 0.0733 |  | 382,150 |  |
| 2017 | 3,572,222.27 |  | 75.00 |  | 1.33 |  | 47,510.56 |  | 70.50 |  | 0.0600 |  | 214,333 |  |
| 2018 | 3,176,903.12 |  | 75.00 |  | 1.33 |  | 42,252.81 |  | 71.50 |  | 0.0467 |  | 148,266 |  |
| 2019 | 18,665,241.12 |  | 75.00 |  | 1.33 |  | 248,247.71 |  | 72.50 |  | 0.0333 |  | 622,112 |  |
| 2020 | 7,996,250.38 |  | 75.00 |  | 1.33 |  | 106,350.13 |  | 73.50 |  | 0.0200 |  | 159,925 |  |
| 2021 | 32,516,816.23 |  | 75.00 |  | 1.33 |  | 432,473.66 |  | 74.50 |  | 0.0067 |  | 216,887 |  |
|  | | | | | | | | | | | | | | |
|  | 271,402,573.86 |  |  | | | | 3,609,654.23 |  |  | | | | 82,450,318 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.33 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 70-R1.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 97,755.32 |  | 70.00 |  | 1.43 |  | 1,397.90 |  | 17.98 |  | 0.7431 |  | 72,646 |  |
| 1942 | 5,216.55 |  | 70.00 |  | 1.43 |  | 74.60 |  | 18.38 |  | 0.7374 |  | 3,847 |  |
| 1943 | 2,753.18 |  | 70.00 |  | 1.43 |  | 39.37 |  | 18.78 |  | 0.7317 |  | 2,015 |  |
| 1944 | 161.53 |  | 70.00 |  | 1.43 |  | 2.31 |  | 19.19 |  | 0.7259 |  | 117 |  |
| 1945 | 7,418.18 |  | 70.00 |  | 1.43 |  | 106.08 |  | 19.61 |  | 0.7199 |  | 5,340 |  |
| 1946 | 395.84 |  | 70.00 |  | 1.43 |  | 5.66 |  | 20.03 |  | 0.7139 |  | 283 |  |
| 1947 | 6.88 |  | 70.00 |  | 1.43 |  | 0.10 |  | 20.47 |  | 0.7076 |  | 5 |  |
| 1948 | 9,592.21 |  | 70.00 |  | 1.43 |  | 137.17 |  | 20.90 |  | 0.7014 |  | 6,728 |  |
| 1949 | 22,630.11 |  | 70.00 |  | 1.43 |  | 323.61 |  | 21.35 |  | 0.6950 |  | 15,728 |  |
| 1950 | 2,383.16 |  | 70.00 |  | 1.43 |  | 34.08 |  | 21.81 |  | 0.6884 |  | 1,641 |  |
| 1951 | 3,211.99 |  | 70.00 |  | 1.43 |  | 45.93 |  | 22.27 |  | 0.6819 |  | 2,190 |  |
| 1952 | 8,088.84 |  | 70.00 |  | 1.43 |  | 115.67 |  | 22.74 |  | 0.6751 |  | 5,461 |  |
| 1953 | 16,449.26 |  | 70.00 |  | 1.43 |  | 235.22 |  | 23.22 |  | 0.6683 |  | 10,993 |  |
| 1954 | 18,946.11 |  | 70.00 |  | 1.43 |  | 270.93 |  | 23.70 |  | 0.6614 |  | 12,532 |  |
| 1955 | 20,032.69 |  | 70.00 |  | 1.43 |  | 286.47 |  | 24.19 |  | 0.6544 |  | 13,110 |  |
| 1956 | 22,789.76 |  | 70.00 |  | 1.43 |  | 325.89 |  | 24.69 |  | 0.6473 |  | 14,752 |  |
| 1957 | 123,829.91 |  | 70.00 |  | 1.43 |  | 1,770.77 |  | 25.20 |  | 0.6400 |  | 79,251 |  |
| 1958 | 121,806.14 |  | 70.00 |  | 1.43 |  | 1,741.83 |  | 25.71 |  | 0.6327 |  | 77,068 |  |
| 1959 | 43,969.08 |  | 70.00 |  | 1.43 |  | 628.76 |  | 26.24 |  | 0.6251 |  | 27,487 |  |
| 1960 | 44,589.82 |  | 70.00 |  | 1.43 |  | 637.63 |  | 26.76 |  | 0.6177 |  | 27,544 |  |
| 1961 | 76,921.14 |  | 70.00 |  | 1.43 |  | 1,099.97 |  | 27.30 |  | 0.6100 |  | 46,922 |  |
| 1962 | 28,341.62 |  | 70.00 |  | 1.43 |  | 405.29 |  | 27.84 |  | 0.6023 |  | 17,070 |  |
| 1963 | 57,859.65 |  | 70.00 |  | 1.43 |  | 827.39 |  | 28.40 |  | 0.5943 |  | 34,385 |  |
| 1964 | 4,581.28 |  | 70.00 |  | 1.43 |  | 65.51 |  | 28.95 |  | 0.5864 |  | 2,687 |  |
| 1965 | 150,517.43 |  | 70.00 |  | 1.43 |  | 2,152.40 |  | 29.52 |  | 0.5783 |  | 87,043 |  |
| 1966 | 197,202.36 |  | 70.00 |  | 1.43 |  | 2,819.99 |  | 30.09 |  | 0.5701 |  | 112,433 |  |
| 1967 | 116,326.12 |  | 70.00 |  | 1.43 |  | 1,663.46 |  | 30.67 |  | 0.5619 |  | 65,359 |  |
| 1968 | 439,339.58 |  | 70.00 |  | 1.43 |  | 6,282.56 |  | 31.26 |  | 0.5534 |  | 243,144 |  |
| 1969 | 63,739.73 |  | 70.00 |  | 1.43 |  | 911.48 |  | 31.85 |  | 0.5450 |  | 34,738 |  |
| 1970 | 846,941.97 |  | 70.00 |  | 1.43 |  | 12,111.27 |  | 32.45 |  | 0.5364 |  | 454,325 |  |
| 1971 | 273,657.57 |  | 70.00 |  | 1.43 |  | 3,913.30 |  | 33.05 |  | 0.5279 |  | 144,453 |  |
| 1972 | 629,142.18 |  | 70.00 |  | 1.43 |  | 8,996.73 |  | 33.67 |  | 0.5190 |  | 326,525 |  |
| 1973 | 485,780.18 |  | 70.00 |  | 1.43 |  | 6,946.66 |  | 34.28 |  | 0.5103 |  | 247,889 |  |
| 1974 | 533,655.34 |  | 70.00 |  | 1.43 |  | 7,631.27 |  | 34.91 |  | 0.5013 |  | 267,516 |  |
| 1975 | 481,427.96 |  | 70.00 |  | 1.43 |  | 6,884.42 |  | 35.54 |  | 0.4923 |  | 237,002 |  |
| 1976 | 1,381,010.87 |  | 70.00 |  | 1.43 |  | 19,748.46 |  | 36.18 |  | 0.4831 |  | 667,222 |  |
| 1977 | 1,956,215.72 |  | 70.00 |  | 1.43 |  | 27,973.88 |  | 36.82 |  | 0.4740 |  | 927,246 |  |
| 1978 | 617,674.01 |  | 70.00 |  | 1.43 |  | 8,832.74 |  | 37.47 |  | 0.4647 |  | 287,039 |  |
| 1979 | 1,226,378.16 |  | 70.00 |  | 1.43 |  | 17,537.21 |  | 38.13 |  | 0.4553 |  | 558,358 |  |
| 1980 | 3,540,385.28 |  | 70.00 |  | 1.43 |  | 50,627.51 |  | 38.79 |  | 0.4459 |  | 1,578,516 |  |
| 1981 | 302,553.75 |  | 70.00 |  | 1.43 |  | 4,326.52 |  | 39.45 |  | 0.4364 |  | 132,044 |  |
| 1982 | 2,151,473.25 |  | 70.00 |  | 1.43 |  | 30,766.07 |  | 40.12 |  | 0.4269 |  | 918,378 |  |
| 1983 | 548,968.67 |  | 70.00 |  | 1.43 |  | 7,850.25 |  | 40.80 |  | 0.4171 |  | 228,997 |  |
| 1984 | 761,021.38 |  | 70.00 |  | 1.43 |  | 10,882.61 |  | 41.48 |  | 0.4074 |  | 310,063 |  |
| 1985 | 366,892.91 |  | 70.00 |  | 1.43 |  | 5,246.57 |  | 42.17 |  | 0.3976 |  | 145,866 |  |
| 1986 | 997,303.59 |  | 70.00 |  | 1.43 |  | 14,261.44 |  | 42.86 |  | 0.3877 |  | 386,665 |  |
| 1987 | 261,156.82 |  | 70.00 |  | 1.43 |  | 3,734.54 |  | 43.56 |  | 0.3777 |  | 98,642 |  |
| 1988 | 5,311,582.36 |  | 70.00 |  | 1.43 |  | 75,955.63 |  | 44.26 |  | 0.3677 |  | 1,953,122 |  |
| 1989 | 1,238,414.94 |  | 70.00 |  | 1.43 |  | 17,709.33 |  | 44.97 |  | 0.3576 |  | 442,820 |  |
| 1990 | 538,896.48 |  | 70.00 |  | 1.43 |  | 7,706.22 |  | 45.68 |  | 0.3474 |  | 187,229 |  |
| 1991 | 695,938.34 |  | 70.00 |  | 1.43 |  | 9,951.92 |  | 46.40 |  | 0.3371 |  | 234,629 |  |
| 1992 | 752,305.22 |  | 70.00 |  | 1.43 |  | 10,757.96 |  | 47.12 |  | 0.3269 |  | 245,898 |  |
| 1993 | 3,859,342.38 |  | 70.00 |  | 1.43 |  | 55,188.60 |  | 47.84 |  | 0.3166 |  | 1,221,752 |  |
| 1994 | 629,515.76 |  | 70.00 |  | 1.43 |  | 9,002.08 |  | 48.57 |  | 0.3061 |  | 192,720 |  |
| 1995 | 5,455,442.79 |  | 70.00 |  | 1.43 |  | 78,012.83 |  | 49.30 |  | 0.2957 |  | 1,613,229 |  |
| 1996 | 485,025.71 |  | 70.00 |  | 1.43 |  | 6,935.87 |  | 50.04 |  | 0.2851 |  | 138,300 |  |
| 1997 | 504,957.76 |  | 70.00 |  | 1.43 |  | 7,220.90 |  | 50.78 |  | 0.2746 |  | 138,646 |  |
| 1998 | 796,276.96 |  | 70.00 |  | 1.43 |  | 11,386.76 |  | 51.53 |  | 0.2639 |  | 210,106 |  |
| 1999 | 2,016,417.37 |  | 70.00 |  | 1.43 |  | 28,834.77 |  | 52.27 |  | 0.2533 |  | 510,738 |  |
| 2000 | 2,399,083.20 |  | 70.00 |  | 1.43 |  | 34,306.89 |  | 53.02 |  | 0.2426 |  | 581,946 |  |
| 2001 | 6,709,714.05 |  | 70.00 |  | 1.43 |  | 95,948.91 |  | 53.78 |  | 0.2317 |  | 1,554,708 |  |
| 2002 | 5,293,282.48 |  | 70.00 |  | 1.43 |  | 75,693.94 |  | 54.54 |  | 0.2209 |  | 1,169,074 |  |
| 2003 | 3,856,612.18 |  | 70.00 |  | 1.43 |  | 55,149.55 |  | 55.30 |  | 0.2100 |  | 809,889 |  |
| 2004 | 2,514,222.11 |  | 70.00 |  | 1.43 |  | 35,953.38 |  | 56.06 |  | 0.1991 |  | 500,682 |  |
| 2005 | 8,883,972.62 |  | 70.00 |  | 1.43 |  | 127,040.81 |  | 56.83 |  | 0.1881 |  | 1,671,431 |  |
| 2006 | 5,179,960.28 |  | 70.00 |  | 1.43 |  | 74,073.43 |  | 57.61 |  | 0.1770 |  | 916,853 |  |
| 2007 | 3,613,488.81 |  | 70.00 |  | 1.43 |  | 51,672.89 |  | 58.38 |  | 0.1660 |  | 599,839 |  |
| 2008 | 6,693,254.88 |  | 70.00 |  | 1.43 |  | 95,713.54 |  | 59.16 |  | 0.1549 |  | 1,036,517 |  |
| 2009 | 7,303,699.01 |  | 70.00 |  | 1.43 |  | 104,442.90 |  | 59.94 |  | 0.1437 |  | 1,049,615 |  |
| 2010 | 5,302,079.28 |  | 70.00 |  | 1.43 |  | 75,819.73 |  | 60.73 |  | 0.1324 |  | 702,154 |  |
| 2011 | 8,952,993.45 |  | 70.00 |  | 1.43 |  | 128,027.81 |  | 61.52 |  | 0.1211 |  | 1,084,566 |  |
| 2012 | 6,502,833.69 |  | 70.00 |  | 1.43 |  | 92,990.52 |  | 62.31 |  | 0.1099 |  | 714,401 |  |
| 2013 | 4,819,225.66 |  | 70.00 |  | 1.43 |  | 68,914.93 |  | 63.10 |  | 0.0986 |  | 475,031 |  |
| 2014 | 7,946,887.74 |  | 70.00 |  | 1.43 |  | 113,640.49 |  | 63.90 |  | 0.0871 |  | 692,492 |  |
| 2015 | 23,490,768.47 |  | 70.00 |  | 1.43 |  | 335,917.99 |  | 64.71 |  | 0.0756 |  | 1,775,197 |  |
| 2016 | 18,378,168.83 |  | 70.00 |  | 1.43 |  | 262,807.81 |  | 65.51 |  | 0.0641 |  | 1,178,776 |  |
| 2017 | 20,130,636.20 |  | 70.00 |  | 1.43 |  | 287,868.10 |  | 66.32 |  | 0.0526 |  | 1,058,268 |  |
| 2018 | 27,649,687.57 |  | 70.00 |  | 1.43 |  | 395,390.53 |  | 67.13 |  | 0.0410 |  | 1,133,637 |  |
| 2019 | 62,159,097.83 |  | 70.00 |  | 1.43 |  | 888,875.10 |  | 67.95 |  | 0.0293 |  | 1,820,640 |  |
| 2020 | 26,202,075.65 |  | 70.00 |  | 1.43 |  | 374,689.68 |  | 68.77 |  | 0.0176 |  | 460,370 |  |
| 2021 | 37,742,666.83 |  | 70.00 |  | 1.43 |  | 539,720.14 |  | 69.59 |  | 0.0059 |  | 221,172 |  |
|  | | | | | | | | | | | | | | |
|  | 343,077,021.97 |  |  | | | | 4,906,001.42 |  |  | | | | 37,235,712 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.43 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 41-S0 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 32,226.54 |  | 41.00 |  | 2.44 |  | 786.33 |  | 0.56 |  | 0.9863 |  | 31,786 |  |
| 1942 | 2,615.19 |  | 41.00 |  | 2.44 |  | 63.81 |  | 0.92 |  | 0.9776 |  | 2,557 |  |
| 1943 | 10.88 |  | 41.00 |  | 2.44 |  | 0.27 |  | 1.28 |  | 0.9688 |  | 11 |  |
| 1944 | 3,396.09 |  | 41.00 |  | 2.44 |  | 82.86 |  | 1.65 |  | 0.9598 |  | 3,259 |  |
| 1945 | 31,685.11 |  | 41.00 |  | 2.44 |  | 773.12 |  | 2.02 |  | 0.9507 |  | 30,124 |  |
| 1947 | 3,220.03 |  | 41.00 |  | 2.44 |  | 78.57 |  | 2.76 |  | 0.9327 |  | 3,003 |  |
| 1948 | 66,459.11 |  | 41.00 |  | 2.44 |  | 1,621.60 |  | 3.14 |  | 0.9234 |  | 61,369 |  |
| 1949 | 81,496.34 |  | 41.00 |  | 2.44 |  | 1,988.51 |  | 3.51 |  | 0.9144 |  | 74,519 |  |
| 1950 | 172,336.66 |  | 41.00 |  | 2.44 |  | 4,205.01 |  | 3.89 |  | 0.9051 |  | 155,985 |  |
| 1951 | 52,433.86 |  | 41.00 |  | 2.44 |  | 1,279.39 |  | 4.27 |  | 0.8959 |  | 46,973 |  |
| 1952 | 469,664.75 |  | 41.00 |  | 2.44 |  | 11,459.82 |  | 4.65 |  | 0.8866 |  | 416,400 |  |
| 1953 | 289,929.47 |  | 41.00 |  | 2.44 |  | 7,074.28 |  | 5.03 |  | 0.8773 |  | 254,361 |  |
| 1954 | 752,356.21 |  | 41.00 |  | 2.44 |  | 18,357.49 |  | 5.41 |  | 0.8681 |  | 653,083 |  |
| 1955 | 634,111.41 |  | 41.00 |  | 2.44 |  | 15,472.32 |  | 5.79 |  | 0.8588 |  | 544,562 |  |
| 1956 | 122,719.93 |  | 41.00 |  | 2.44 |  | 2,994.37 |  | 6.18 |  | 0.8493 |  | 104,222 |  |
| 1957 | 1,130,039.52 |  | 41.00 |  | 2.44 |  | 27,572.96 |  | 6.57 |  | 0.8398 |  | 948,962 |  |
| 1958 | 1,353,230.62 |  | 41.00 |  | 2.44 |  | 33,018.83 |  | 6.96 |  | 0.8302 |  | 1,123,506 |  |
| 1959 | 400,363.33 |  | 41.00 |  | 2.44 |  | 9,768.87 |  | 7.35 |  | 0.8207 |  | 328,590 |  |
| 1960 | 465,530.49 |  | 41.00 |  | 2.44 |  | 11,358.94 |  | 7.74 |  | 0.8112 |  | 377,648 |  |
| 1961 | 856,430.09 |  | 41.00 |  | 2.44 |  | 20,896.89 |  | 8.13 |  | 0.8017 |  | 686,609 |  |
| 1962 | 2,501,084.70 |  | 41.00 |  | 2.44 |  | 61,026.47 |  | 8.53 |  | 0.7920 |  | 1,980,734 |  |
| 1963 | 634,020.17 |  | 41.00 |  | 2.44 |  | 15,470.09 |  | 8.93 |  | 0.7822 |  | 495,931 |  |
| 1964 | 1,458,145.54 |  | 41.00 |  | 2.44 |  | 35,578.75 |  | 9.33 |  | 0.7724 |  | 1,126,330 |  |
| 1965 | 3,716,368.80 |  | 41.00 |  | 2.44 |  | 90,679.40 |  | 9.73 |  | 0.7627 |  | 2,834,400 |  |
| 1966 | 6,022,446.54 |  | 41.00 |  | 2.44 |  | 146,947.70 |  | 10.14 |  | 0.7527 |  | 4,532,975 |  |
| 1967 | 2,015,614.90 |  | 41.00 |  | 2.44 |  | 49,181.00 |  | 10.55 |  | 0.7427 |  | 1,496,957 |  |
| 1968 | 4,463,502.33 |  | 41.00 |  | 2.44 |  | 108,909.46 |  | 10.95 |  | 0.7329 |  | 3,271,435 |  |
| 1969 | 465,415.60 |  | 41.00 |  | 2.44 |  | 11,356.14 |  | 11.37 |  | 0.7227 |  | 336,347 |  |
| 1970 | 3,628,361.09 |  | 41.00 |  | 2.44 |  | 88,532.01 |  | 11.78 |  | 0.7127 |  | 2,585,860 |  |
| 1971 | 3,626,675.71 |  | 41.00 |  | 2.44 |  | 88,490.89 |  | 12.20 |  | 0.7024 |  | 2,547,522 |  |
| 1972 | 4,038,603.44 |  | 41.00 |  | 2.44 |  | 98,541.92 |  | 12.62 |  | 0.6922 |  | 2,795,521 |  |
| 1973 | 4,774,652.59 |  | 41.00 |  | 2.44 |  | 116,501.52 |  | 13.04 |  | 0.6820 |  | 3,256,074 |  |
| 1974 | 2,703,932.15 |  | 41.00 |  | 2.44 |  | 65,975.94 |  | 13.46 |  | 0.6717 |  | 1,816,258 |  |
| 1975 | 2,254,639.49 |  | 41.00 |  | 2.44 |  | 55,013.20 |  | 13.89 |  | 0.6612 |  | 1,490,813 |  |
| 1976 | 8,864,885.49 |  | 41.00 |  | 2.44 |  | 216,303.21 |  | 14.32 |  | 0.6507 |  | 5,768,647 |  |
| 1977 | 15,685,075.27 |  | 41.00 |  | 2.44 |  | 382,715.84 |  | 14.76 |  | 0.6400 |  | 10,038,448 |  |
| 1978 | 3,847,432.21 |  | 41.00 |  | 2.44 |  | 93,877.35 |  | 15.19 |  | 0.6295 |  | 2,421,997 |  |
| 1979 | 14,017,414.67 |  | 41.00 |  | 2.44 |  | 342,024.92 |  | 15.63 |  | 0.6188 |  | 8,673,696 |  |
| 1980 | 26,232,061.62 |  | 41.00 |  | 2.44 |  | 640,062.30 |  | 16.08 |  | 0.6078 |  | 15,943,847 |  |
| 1981 | 9,714,427.55 |  | 41.00 |  | 2.44 |  | 237,032.03 |  | 16.53 |  | 0.5968 |  | 5,797,862 |  |
| 1982 | 10,891,334.27 |  | 41.00 |  | 2.44 |  | 265,748.56 |  | 16.98 |  | 0.5859 |  | 6,380,688 |  |
| 1983 | 1,848,058.48 |  | 41.00 |  | 2.44 |  | 45,092.63 |  | 17.43 |  | 0.5749 |  | 1,062,412 |  |
| 1984 | 1,882,097.40 |  | 41.00 |  | 2.44 |  | 45,923.18 |  | 17.89 |  | 0.5637 |  | 1,060,863 |  |
| 1985 | 4,991,003.81 |  | 41.00 |  | 2.44 |  | 121,780.49 |  | 18.35 |  | 0.5524 |  | 2,757,230 |  |
| 1986 | 6,388,906.90 |  | 41.00 |  | 2.44 |  | 155,889.33 |  | 18.82 |  | 0.5410 |  | 3,456,271 |  |
| 1987 | 23,953,525.83 |  | 41.00 |  | 2.44 |  | 584,466.03 |  | 19.29 |  | 0.5295 |  | 12,683,631 |  |
| 1988 | 17,777,735.29 |  | 41.00 |  | 2.44 |  | 433,776.74 |  | 19.77 |  | 0.5178 |  | 9,205,311 |  |
| 1989 | 13,506,011.95 |  | 41.00 |  | 2.44 |  | 329,546.69 |  | 20.25 |  | 0.5061 |  | 6,835,393 |  |
| 1990 | 19,026,053.14 |  | 41.00 |  | 2.44 |  | 464,235.70 |  | 20.73 |  | 0.4944 |  | 9,406,290 |  |
| 1991 | 25,563,047.29 |  | 41.00 |  | 2.44 |  | 623,738.35 |  | 21.22 |  | 0.4824 |  | 12,332,637 |  |
| 1992 | 28,354,407.97 |  | 41.00 |  | 2.44 |  | 691,847.55 |  | 21.72 |  | 0.4702 |  | 13,333,377 |  |
| 1993 | 43,207,710.56 |  | 41.00 |  | 2.44 |  | 1,054,268.14 |  | 22.22 |  | 0.4581 |  | 19,791,292 |  |
| 1994 | 25,751,791.87 |  | 41.00 |  | 2.44 |  | 628,343.72 |  | 22.73 |  | 0.4456 |  | 11,475,256 |  |
| 1995 | 15,401,446.12 |  | 41.00 |  | 2.44 |  | 375,795.29 |  | 23.24 |  | 0.4332 |  | 6,671,444 |  |
| 1996 | 9,640,190.58 |  | 41.00 |  | 2.44 |  | 235,220.65 |  | 23.76 |  | 0.4205 |  | 4,053,604 |  |
| 1997 | 15,790,302.03 |  | 41.00 |  | 2.44 |  | 385,283.37 |  | 24.29 |  | 0.4076 |  | 6,435,495 |  |
| 1998 | 9,105,640.69 |  | 41.00 |  | 2.44 |  | 222,177.63 |  | 24.82 |  | 0.3946 |  | 3,593,359 |  |
| 1999 | 19,865,400.52 |  | 41.00 |  | 2.44 |  | 484,715.77 |  | 25.36 |  | 0.3815 |  | 7,577,856 |  |
| 2000 | 24,472,780.32 |  | 41.00 |  | 2.44 |  | 597,135.84 |  | 25.91 |  | 0.3681 |  | 9,007,207 |  |
| 2001 | 40,862,549.70 |  | 41.00 |  | 2.44 |  | 997,046.21 |  | 26.47 |  | 0.3544 |  | 14,481,279 |  |
| 2002 | 34,570,811.45 |  | 41.00 |  | 2.44 |  | 843,527.80 |  | 27.04 |  | 0.3405 |  | 11,771,016 |  |
| 2003 | 50,373,561.06 |  | 41.00 |  | 2.44 |  | 1,229,114.89 |  | 27.61 |  | 0.3266 |  | 16,451,501 |  |
| 2004 | 32,419,795.38 |  | 41.00 |  | 2.44 |  | 791,043.01 |  | 28.20 |  | 0.3122 |  | 10,121,460 |  |
| 2005 | 65,224,399.14 |  | 41.00 |  | 2.44 |  | 1,591,475.34 |  | 28.79 |  | 0.2978 |  | 19,423,826 |  |
| 2006 | 48,362,598.36 |  | 41.00 |  | 2.44 |  | 1,180,047.40 |  | 29.40 |  | 0.2829 |  | 13,683,230 |  |
| 2007 | 62,548,444.22 |  | 41.00 |  | 2.44 |  | 1,526,182.04 |  | 30.01 |  | 0.2681 |  | 16,766,110 |  |
| 2008 | 71,012,038.32 |  | 41.00 |  | 2.44 |  | 1,732,693.74 |  | 30.64 |  | 0.2527 |  | 17,943,322 |  |
| 2009 | 78,860,486.00 |  | 41.00 |  | 2.44 |  | 1,924,195.86 |  | 31.29 |  | 0.2368 |  | 18,676,529 |  |
| 2010 | 64,783,883.25 |  | 41.00 |  | 2.44 |  | 1,580,726.75 |  | 31.94 |  | 0.2210 |  | 14,315,943 |  |
| 2011 | 105,395,958.96 |  | 41.00 |  | 2.44 |  | 2,571,661.40 |  | 32.61 |  | 0.2046 |  | 21,567,175 |  |
| 2012 | 79,247,001.15 |  | 41.00 |  | 2.44 |  | 1,933,626.83 |  | 33.30 |  | 0.1878 |  | 14,882,587 |  |
| 2013 | 99,473,736.75 |  | 41.00 |  | 2.44 |  | 2,427,159.18 |  | 34.01 |  | 0.1705 |  | 16,959,277 |  |
| 2014 | 107,949,176.05 |  | 41.00 |  | 2.44 |  | 2,633,959.90 |  | 34.73 |  | 0.1529 |  | 16,508,667 |  |
| 2015 | 184,446,188.25 |  | 41.00 |  | 2.44 |  | 4,500,486.99 |  | 35.47 |  | 0.1349 |  | 24,878,102 |  |
| 2016 | 125,391,916.26 |  | 41.00 |  | 2.44 |  | 3,059,562.76 |  | 36.24 |  | 0.1161 |  | 14,558,001 |  |
| 2017 | 139,793,389.71 |  | 41.00 |  | 2.44 |  | 3,410,958.71 |  | 37.03 |  | 0.0968 |  | 13,536,194 |  |
| 2018 | 210,833,707.09 |  | 41.00 |  | 2.44 |  | 5,144,342.45 |  | 37.85 |  | 0.0768 |  | 16,198,354 |  |
| 2019 | 238,895,699.57 |  | 41.00 |  | 2.44 |  | 5,829,055.07 |  | 38.70 |  | 0.0561 |  | 13,402,049 |  |
| 2020 | 267,734,856.04 |  | 41.00 |  | 2.44 |  | 6,532,730.49 |  | 39.58 |  | 0.0346 |  | 9,271,658 |  |
| 2021 | 375,714,776.45 |  | 41.00 |  | 2.44 |  | 9,167,440.55 |  | 40.51 |  | 0.0120 |  | 4,489,792 |  |
|  | | | | | | | | | | | | | | |
|  | 2,928,897,433.67 |  |  | | | | 71,465,097.41 |  |  | | | | 552,064,871 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.44 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 30-R1 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1962 | 14,702.53 |  | 30.00 |  | 3.33 |  | 489.59 |  | 0.27 |  | 0.9910 |  | 14,570 |  |
| 1974 | 438,092.20 |  | 30.00 |  | 3.33 |  | 14,588.47 |  | 4.04 |  | 0.8653 |  | 379,094 |  |
| 1975 | 1,509,680.86 |  | 30.00 |  | 3.33 |  | 50,272.37 |  | 4.37 |  | 0.8543 |  | 1,289,766 |  |
| 1976 | 695,547.89 |  | 30.00 |  | 3.33 |  | 23,161.74 |  | 4.70 |  | 0.8433 |  | 586,576 |  |
| 1981 | 1,286,887.04 |  | 30.00 |  | 3.33 |  | 42,853.34 |  | 6.49 |  | 0.7837 |  | 1,008,495 |  |
| 1982 | 132,663.80 |  | 30.00 |  | 3.33 |  | 4,417.70 |  | 6.88 |  | 0.7707 |  | 102,240 |  |
| 1988 | 2,228,765.21 |  | 30.00 |  | 3.33 |  | 74,217.88 |  | 9.38 |  | 0.6873 |  | 1,531,897 |  |
| 1990 | 2,936,065.46 |  | 30.00 |  | 3.33 |  | 97,770.98 |  | 10.30 |  | 0.6567 |  | 1,928,026 |  |
| 1991 | 808,360.07 |  | 30.00 |  | 3.33 |  | 26,918.39 |  | 10.78 |  | 0.6407 |  | 517,892 |  |
| 1992 | 5,360,126.10 |  | 30.00 |  | 3.33 |  | 178,492.20 |  | 11.26 |  | 0.6247 |  | 3,348,310 |  |
| 1993 | 8,800,888.30 |  | 30.00 |  | 3.33 |  | 293,069.58 |  | 11.76 |  | 0.6080 |  | 5,350,940 |  |
| 1996 | 4,577,357.46 |  | 30.00 |  | 3.33 |  | 152,426.00 |  | 13.32 |  | 0.5560 |  | 2,545,011 |  |
| 1997 | 3,170,339.84 |  | 30.00 |  | 3.33 |  | 105,572.32 |  | 13.86 |  | 0.5380 |  | 1,705,643 |  |
| 1998 | 636,932.41 |  | 30.00 |  | 3.33 |  | 21,209.85 |  | 14.42 |  | 0.5193 |  | 330,778 |  |
| 1999 | 5,975,477.20 |  | 30.00 |  | 3.33 |  | 198,983.39 |  | 14.99 |  | 0.5003 |  | 2,989,711 |  |
| 2000 | 8,695,023.99 |  | 30.00 |  | 3.33 |  | 289,544.30 |  | 15.57 |  | 0.4810 |  | 4,182,307 |  |
| 2001 | 17,654,435.93 |  | 30.00 |  | 3.33 |  | 587,892.72 |  | 16.16 |  | 0.4613 |  | 8,144,521 |  |
| 2002 | 3,081,748.79 |  | 30.00 |  | 3.33 |  | 102,622.23 |  | 16.76 |  | 0.4413 |  | 1,360,068 |  |
| 2003 | 3,339,051.39 |  | 30.00 |  | 3.33 |  | 111,190.41 |  | 17.37 |  | 0.4210 |  | 1,405,741 |  |
| 2004 | 10,023,931.63 |  | 30.00 |  | 3.33 |  | 333,796.92 |  | 17.99 |  | 0.4003 |  | 4,012,881 |  |
| 2005 | 5,581,445.14 |  | 30.00 |  | 3.33 |  | 185,862.12 |  | 18.62 |  | 0.3793 |  | 2,117,210 |  |
| 2006 | 8,994,459.72 |  | 30.00 |  | 3.33 |  | 299,515.51 |  | 19.26 |  | 0.3580 |  | 3,220,017 |  |
| 2007 | 757,819.49 |  | 30.00 |  | 3.33 |  | 25,235.39 |  | 19.91 |  | 0.3363 |  | 254,877 |  |
| 2008 | 7,480,819.72 |  | 30.00 |  | 3.33 |  | 249,111.30 |  | 20.56 |  | 0.3147 |  | 2,353,990 |  |
| 2009 | 61,660,104.94 |  | 30.00 |  | 3.33 |  | 2,053,281.49 |  | 21.22 |  | 0.2927 |  | 18,046,063 |  |
| 2010 | 4,761,411.31 |  | 30.00 |  | 3.33 |  | 158,555.00 |  | 21.89 |  | 0.2703 |  | 1,287,152 |  |
| 2011 | 57,700,002.76 |  | 30.00 |  | 3.33 |  | 1,921,410.09 |  | 22.57 |  | 0.2477 |  | 14,290,560 |  |
| 2012 | 32,350,436.63 |  | 30.00 |  | 3.33 |  | 1,077,269.54 |  | 23.25 |  | 0.2250 |  | 7,278,848 |  |
| 2013 | 14,324,899.77 |  | 30.00 |  | 3.33 |  | 477,019.16 |  | 23.93 |  | 0.2023 |  | 2,898,357 |  |
| 2014 | 24,731,946.97 |  | 30.00 |  | 3.33 |  | 823,573.83 |  | 24.62 |  | 0.1793 |  | 4,435,180 |  |
| 2015 | 5,552,266.71 |  | 30.00 |  | 3.33 |  | 184,890.48 |  | 25.32 |  | 0.1560 |  | 866,154 |  |
| 2016 | 34,578,410.16 |  | 30.00 |  | 3.33 |  | 1,151,461.06 |  | 26.02 |  | 0.1327 |  | 4,587,518 |  |
| 2017 | 6,279,753.49 |  | 30.00 |  | 3.33 |  | 209,115.79 |  | 26.73 |  | 0.1090 |  | 684,493 |  |
| 2018 | 19,785,500.96 |  | 30.00 |  | 3.33 |  | 658,857.18 |  | 27.44 |  | 0.0853 |  | 1,688,297 |  |
| 2019 | 29,308,838.15 |  | 30.00 |  | 3.33 |  | 975,984.31 |  | 28.16 |  | 0.0613 |  | 1,797,511 |  |
| 2020 | 31,175,692.12 |  | 30.00 |  | 3.33 |  | 1,038,150.55 |  | 28.89 |  | 0.0370 |  | 1,153,501 |  |
| 2021 | 56,698,398.16 |  | 30.00 |  | 3.33 |  | 1,888,056.66 |  | 29.63 |  | 0.0123 |  | 699,091 |  |
|  | | | | | | | | | | | | | | |
|  | 483,088,284.30 |  |  | | | | 16,086,839.84 |  |  | | | | 110,393,286 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 65-R4 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1943 | 80.90 |  | 65.00 |  | 1.54 |  | 1.25 |  | 4.85 |  | 0.9254 |  | 75 |  |
| 1949 | 187.96 |  | 65.00 |  | 1.54 |  | 2.89 |  | 6.61 |  | 0.8983 |  | 169 |  |
| 1952 | 18,740.45 |  | 65.00 |  | 1.54 |  | 288.60 |  | 7.65 |  | 0.8823 |  | 16,535 |  |
| 1958 | 343,485.78 |  | 65.00 |  | 1.54 |  | 5,289.68 |  | 10.24 |  | 0.8425 |  | 289,373 |  |
| 1959 | 516.23 |  | 65.00 |  | 1.54 |  | 7.95 |  | 10.75 |  | 0.8346 |  | 431 |  |
| 1960 | 1,042,354.09 |  | 65.00 |  | 1.54 |  | 16,052.25 |  | 11.30 |  | 0.8262 |  | 861,141 |  |
| 1962 | 56,563.27 |  | 65.00 |  | 1.54 |  | 871.07 |  | 12.45 |  | 0.8085 |  | 45,729 |  |
| 1963 | 311,435.87 |  | 65.00 |  | 1.54 |  | 4,796.11 |  | 13.06 |  | 0.7991 |  | 248,862 |  |
| 1964 | 400,908.17 |  | 65.00 |  | 1.54 |  | 6,173.99 |  | 13.69 |  | 0.7894 |  | 316,469 |  |
| 1965 | 43.24 |  | 65.00 |  | 1.54 |  | 0.67 |  | 14.34 |  | 0.7794 |  | 34 |  |
| 1966 | 861,759.14 |  | 65.00 |  | 1.54 |  | 13,271.09 |  | 15.00 |  | 0.7692 |  | 662,891 |  |
| 1967 | 1,547,165.49 |  | 65.00 |  | 1.54 |  | 23,826.35 |  | 15.67 |  | 0.7589 |  | 1,174,175 |  |
| 1968 | 1,034,740.76 |  | 65.00 |  | 1.54 |  | 15,935.01 |  | 16.36 |  | 0.7483 |  | 774,307 |  |
| 1970 | 66,456.09 |  | 65.00 |  | 1.54 |  | 1,023.42 |  | 17.76 |  | 0.7268 |  | 48,298 |  |
| 1971 | 1,279,761.32 |  | 65.00 |  | 1.54 |  | 19,708.32 |  | 18.48 |  | 0.7157 |  | 915,912 |  |
| 1972 | 226,598.40 |  | 65.00 |  | 1.54 |  | 3,489.62 |  | 19.20 |  | 0.7046 |  | 159,666 |  |
| 1973 | 1,393,995.76 |  | 65.00 |  | 1.54 |  | 21,467.53 |  | 19.94 |  | 0.6932 |  | 966,360 |  |
| 1974 | 8,543,139.81 |  | 65.00 |  | 1.54 |  | 131,564.35 |  | 20.69 |  | 0.6817 |  | 5,823,773 |  |
| 1975 | 1,682,382.73 |  | 65.00 |  | 1.54 |  | 25,908.69 |  | 21.46 |  | 0.6699 |  | 1,126,944 |  |
| 1976 | 100,184.72 |  | 65.00 |  | 1.54 |  | 1,542.84 |  | 22.23 |  | 0.6580 |  | 65,922 |  |
| 1977 | 2,042,501.27 |  | 65.00 |  | 1.54 |  | 31,454.52 |  | 23.02 |  | 0.6459 |  | 1,319,149 |  |
| 1978 | 21,811.31 |  | 65.00 |  | 1.54 |  | 335.89 |  | 23.81 |  | 0.6337 |  | 13,822 |  |
| 1979 | 245,162.54 |  | 65.00 |  | 1.54 |  | 3,775.50 |  | 24.62 |  | 0.6212 |  | 152,302 |  |
| 1980 | 788,925.77 |  | 65.00 |  | 1.54 |  | 12,149.46 |  | 25.44 |  | 0.6086 |  | 480,156 |  |
| 1981 | 87,957.68 |  | 65.00 |  | 1.54 |  | 1,354.55 |  | 26.27 |  | 0.5959 |  | 52,410 |  |
| 1982 | 64,440.83 |  | 65.00 |  | 1.54 |  | 992.39 |  | 27.12 |  | 0.5828 |  | 37,554 |  |
| 1983 | 91,857.13 |  | 65.00 |  | 1.54 |  | 1,414.60 |  | 27.97 |  | 0.5697 |  | 52,330 |  |
| 1984 | 4,689,305.51 |  | 65.00 |  | 1.54 |  | 72,215.30 |  | 28.83 |  | 0.5565 |  | 2,609,411 |  |
| 1985 | 1,546,335.40 |  | 65.00 |  | 1.54 |  | 23,813.57 |  | 29.70 |  | 0.5431 |  | 839,784 |  |
| 1986 | 34,214.99 |  | 65.00 |  | 1.54 |  | 526.91 |  | 30.58 |  | 0.5295 |  | 18,118 |  |
| 1987 | 127,899.76 |  | 65.00 |  | 1.54 |  | 1,969.66 |  | 31.47 |  | 0.5159 |  | 65,977 |  |
| 1988 | 127,478.61 |  | 65.00 |  | 1.54 |  | 1,963.17 |  | 32.37 |  | 0.5020 |  | 63,994 |  |
| 1989 | 15,913.37 |  | 65.00 |  | 1.54 |  | 245.07 |  | 33.28 |  | 0.4880 |  | 7,766 |  |
| 1990 | 4,176.70 |  | 65.00 |  | 1.54 |  | 64.32 |  | 34.20 |  | 0.4739 |  | 1,979 |  |
| 1992 | 1,568.68 |  | 65.00 |  | 1.54 |  | 24.16 |  | 36.05 |  | 0.4454 |  | 699 |  |
| 1993 | 386,912.29 |  | 65.00 |  | 1.54 |  | 5,958.45 |  | 36.99 |  | 0.4309 |  | 166,728 |  |
| 1994 | 163,950.89 |  | 65.00 |  | 1.54 |  | 2,524.84 |  | 37.93 |  | 0.4165 |  | 68,279 |  |
| 1996 | 202,598.56 |  | 65.00 |  | 1.54 |  | 3,120.02 |  | 39.83 |  | 0.3872 |  | 78,452 |  |
| 1997 | 931.06 |  | 65.00 |  | 1.54 |  | 14.34 |  | 40.79 |  | 0.3725 |  | 347 |  |
| 1998 | 61,257.60 |  | 65.00 |  | 1.54 |  | 943.37 |  | 41.75 |  | 0.3577 |  | 21,911 |  |
| 2000 | 1,680,892.28 |  | 65.00 |  | 1.54 |  | 25,885.74 |  | 43.69 |  | 0.3279 |  | 551,081 |  |
| 2001 | 3,248,268.45 |  | 65.00 |  | 1.54 |  | 50,023.33 |  | 44.66 |  | 0.3129 |  | 1,016,448 |  |
| 2002 | 1,669,039.44 |  | 65.00 |  | 1.54 |  | 25,703.21 |  | 45.64 |  | 0.2979 |  | 497,123 |  |
| 2003 | 2,555,254.11 |  | 65.00 |  | 1.54 |  | 39,350.91 |  | 46.62 |  | 0.2828 |  | 722,549 |  |
| 2004 | 2,277,908.87 |  | 65.00 |  | 1.54 |  | 35,079.80 |  | 47.60 |  | 0.2677 |  | 609,773 |  |
| 2005 | 46,173.05 |  | 65.00 |  | 1.54 |  | 711.06 |  | 48.58 |  | 0.2526 |  | 11,664 |  |
| 2006 | 445,320.36 |  | 65.00 |  | 1.54 |  | 6,857.93 |  | 49.57 |  | 0.2374 |  | 105,710 |  |
| 2007 | 449,359.19 |  | 65.00 |  | 1.54 |  | 6,920.13 |  | 50.56 |  | 0.2222 |  | 99,825 |  |
| 2008 | 835,576.98 |  | 65.00 |  | 1.54 |  | 12,867.89 |  | 51.55 |  | 0.2069 |  | 172,898 |  |
| 2009 | 2,751,302.38 |  | 65.00 |  | 1.54 |  | 42,370.06 |  | 52.54 |  | 0.1917 |  | 527,397 |  |
| 2010 | 1,981,474.73 |  | 65.00 |  | 1.54 |  | 30,514.71 |  | 53.53 |  | 0.1765 |  | 349,651 |  |
| 2011 | 831,308.15 |  | 65.00 |  | 1.54 |  | 12,802.15 |  | 54.53 |  | 0.1611 |  | 133,907 |  |
| 2012 | 6,914,083.47 |  | 65.00 |  | 1.54 |  | 106,476.89 |  | 55.52 |  | 0.1459 |  | 1,008,419 |  |
| 2013 | 2,116,626.69 |  | 65.00 |  | 1.54 |  | 32,596.05 |  | 56.52 |  | 0.1305 |  | 276,135 |  |
| 2014 | 5,023,182.41 |  | 65.00 |  | 1.54 |  | 77,357.01 |  | 57.51 |  | 0.1152 |  | 578,821 |  |
| 2015 | 5,435,569.14 |  | 65.00 |  | 1.54 |  | 83,707.76 |  | 58.51 |  | 0.0999 |  | 542,742 |  |
| 2016 | 2,388,152.00 |  | 65.00 |  | 1.54 |  | 36,777.54 |  | 59.51 |  | 0.0845 |  | 201,703 |  |
| 2017 | 12,422,410.33 |  | 65.00 |  | 1.54 |  | 191,305.12 |  | 60.51 |  | 0.0691 |  | 858,140 |  |
| 2018 | 9,556,912.29 |  | 65.00 |  | 1.54 |  | 147,176.45 |  | 61.50 |  | 0.0539 |  | 514,640 |  |
| 2019 | 19,492,341.44 |  | 65.00 |  | 1.54 |  | 300,182.06 |  | 62.50 |  | 0.0385 |  | 749,675 |  |
| 2020 | 541,965.51 |  | 65.00 |  | 1.54 |  | 8,346.27 |  | 63.50 |  | 0.0231 |  | 12,509 |  |
| 2021 | 55,638,383.18 |  | 65.00 |  | 1.54 |  | 856,831.10 |  | 64.50 |  | 0.0077 |  | 427,859 |  |
|  | | | | | | | | | | | | | | |
|  | 167,917,204.58 |  |  | | | | 2,585,924.94 |  |  | | | | 29,516,903 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 60-R1 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1926 | 11,160.04 |  | 60.00 |  | 1.67 |  | 186.37 |  | 7.93 |  | 0.8678 |  | 9,685 |  |
| 1927 | 588.14 |  | 60.00 |  | 1.67 |  | 9.82 |  | 8.25 |  | 0.8625 |  | 507 |  |
| 1929 | 8,073.58 |  | 60.00 |  | 1.67 |  | 134.83 |  | 8.90 |  | 0.8517 |  | 6,876 |  |
| 1930 | 4,407.00 |  | 60.00 |  | 1.67 |  | 73.60 |  | 9.24 |  | 0.8460 |  | 3,728 |  |
| 1942 | 9,631.42 |  | 60.00 |  | 1.67 |  | 160.84 |  | 13.56 |  | 0.7740 |  | 7,455 |  |
| 1943 | 10,313.35 |  | 60.00 |  | 1.67 |  | 172.23 |  | 13.95 |  | 0.7675 |  | 7,915 |  |
| 1944 | 12,077.53 |  | 60.00 |  | 1.67 |  | 201.69 |  | 14.35 |  | 0.7608 |  | 9,189 |  |
| 1945 | 7,450.86 |  | 60.00 |  | 1.67 |  | 124.43 |  | 14.74 |  | 0.7543 |  | 5,620 |  |
| 1946 | 704.62 |  | 60.00 |  | 1.67 |  | 11.77 |  | 15.15 |  | 0.7475 |  | 527 |  |
| 1947 | 24,475.88 |  | 60.00 |  | 1.67 |  | 408.75 |  | 15.55 |  | 0.7408 |  | 18,132 |  |
| 1948 | 49,014.77 |  | 60.00 |  | 1.67 |  | 818.55 |  | 15.97 |  | 0.7338 |  | 35,969 |  |
| 1949 | 59,869.38 |  | 60.00 |  | 1.67 |  | 999.82 |  | 16.38 |  | 0.7270 |  | 43,525 |  |
| 1950 | 37,681.79 |  | 60.00 |  | 1.67 |  | 629.29 |  | 16.81 |  | 0.7198 |  | 27,124 |  |
| 1951 | 185,496.23 |  | 60.00 |  | 1.67 |  | 3,097.79 |  | 17.23 |  | 0.7128 |  | 132,227 |  |
| 1952 | 117,954.85 |  | 60.00 |  | 1.67 |  | 1,969.85 |  | 17.66 |  | 0.7057 |  | 83,237 |  |
| 1953 | 291,121.23 |  | 60.00 |  | 1.67 |  | 4,861.72 |  | 18.10 |  | 0.6983 |  | 203,299 |  |
| 1954 | 319,503.52 |  | 60.00 |  | 1.67 |  | 5,335.71 |  | 18.54 |  | 0.6910 |  | 220,777 |  |
| 1955 | 171,555.46 |  | 60.00 |  | 1.67 |  | 2,864.98 |  | 18.99 |  | 0.6835 |  | 117,258 |  |
| 1956 | 207,427.09 |  | 60.00 |  | 1.67 |  | 3,464.03 |  | 19.45 |  | 0.6758 |  | 140,185 |  |
| 1957 | 745,835.59 |  | 60.00 |  | 1.67 |  | 12,455.45 |  | 19.90 |  | 0.6683 |  | 498,464 |  |
| 1958 | 367,708.68 |  | 60.00 |  | 1.67 |  | 6,140.73 |  | 20.37 |  | 0.6605 |  | 242,872 |  |
| 1959 | 225,445.57 |  | 60.00 |  | 1.67 |  | 3,764.94 |  | 20.84 |  | 0.6527 |  | 147,142 |  |
| 1960 | 439,136.40 |  | 60.00 |  | 1.67 |  | 7,333.58 |  | 21.31 |  | 0.6448 |  | 283,168 |  |
| 1961 | 380,669.24 |  | 60.00 |  | 1.67 |  | 6,357.18 |  | 21.79 |  | 0.6368 |  | 242,422 |  |
| 1962 | 842,211.96 |  | 60.00 |  | 1.67 |  | 14,064.94 |  | 22.28 |  | 0.6287 |  | 529,473 |  |
| 1963 | 910,800.52 |  | 60.00 |  | 1.67 |  | 15,210.37 |  | 22.77 |  | 0.6205 |  | 565,152 |  |
| 1964 | 258,454.47 |  | 60.00 |  | 1.67 |  | 4,316.19 |  | 23.27 |  | 0.6122 |  | 158,218 |  |
| 1965 | 1,708,834.58 |  | 60.00 |  | 1.67 |  | 28,537.54 |  | 23.77 |  | 0.6038 |  | 1,031,846 |  |
| 1966 | 5,128,692.19 |  | 60.00 |  | 1.67 |  | 85,649.16 |  | 24.28 |  | 0.5953 |  | 3,053,264 |  |
| 1967 | 2,574,150.32 |  | 60.00 |  | 1.67 |  | 42,988.31 |  | 24.79 |  | 0.5868 |  | 1,510,589 |  |
| 1968 | 1,067,280.22 |  | 60.00 |  | 1.67 |  | 17,823.58 |  | 25.32 |  | 0.5780 |  | 616,888 |  |
| 1969 | 726,571.45 |  | 60.00 |  | 1.67 |  | 12,133.74 |  | 25.84 |  | 0.5693 |  | 413,659 |  |
| 1970 | 1,409,151.47 |  | 60.00 |  | 1.67 |  | 23,532.83 |  | 26.37 |  | 0.5605 |  | 789,829 |  |
| 1971 | 4,791,268.30 |  | 60.00 |  | 1.67 |  | 80,014.18 |  | 26.91 |  | 0.5515 |  | 2,642,384 |  |
| 1972 | 6,164,138.80 |  | 60.00 |  | 1.67 |  | 102,941.12 |  | 27.46 |  | 0.5423 |  | 3,342,997 |  |
| 1973 | 5,627,379.72 |  | 60.00 |  | 1.67 |  | 93,977.24 |  | 28.01 |  | 0.5332 |  | 3,000,350 |  |
| 1974 | 5,218,809.55 |  | 60.00 |  | 1.67 |  | 87,154.12 |  | 28.56 |  | 0.5240 |  | 2,734,656 |  |
| 1975 | 5,256,385.49 |  | 60.00 |  | 1.67 |  | 87,781.64 |  | 29.12 |  | 0.5147 |  | 2,705,304 |  |
| 1976 | 10,338,638.86 |  | 60.00 |  | 1.67 |  | 172,655.27 |  | 29.69 |  | 0.5052 |  | 5,222,770 |  |
| 1977 | 7,003,861.15 |  | 60.00 |  | 1.67 |  | 116,964.48 |  | 30.26 |  | 0.4957 |  | 3,471,604 |  |
| 1978 | 5,635,449.36 |  | 60.00 |  | 1.67 |  | 94,112.00 |  | 30.84 |  | 0.4860 |  | 2,738,828 |  |
| 1979 | 5,756,808.82 |  | 60.00 |  | 1.67 |  | 96,138.71 |  | 31.42 |  | 0.4763 |  | 2,742,141 |  |
| 1980 | 6,613,087.35 |  | 60.00 |  | 1.67 |  | 110,438.56 |  | 32.01 |  | 0.4665 |  | 3,085,005 |  |
| 1981 | 6,206,488.37 |  | 60.00 |  | 1.67 |  | 103,648.36 |  | 32.61 |  | 0.4565 |  | 2,833,262 |  |
| 1982 | 6,475,439.55 |  | 60.00 |  | 1.67 |  | 108,139.84 |  | 33.21 |  | 0.4465 |  | 2,891,284 |  |
| 1983 | 4,428,612.31 |  | 60.00 |  | 1.67 |  | 73,957.83 |  | 33.81 |  | 0.4365 |  | 1,933,089 |  |
| 1984 | 4,003,316.56 |  | 60.00 |  | 1.67 |  | 66,855.39 |  | 34.43 |  | 0.4262 |  | 1,706,093 |  |
| 1985 | 6,993,642.98 |  | 60.00 |  | 1.67 |  | 116,793.84 |  | 35.04 |  | 0.4160 |  | 2,909,355 |  |
| 1986 | 5,745,264.36 |  | 60.00 |  | 1.67 |  | 95,945.91 |  | 35.66 |  | 0.4057 |  | 2,330,681 |  |
| 1987 | 4,824,416.40 |  | 60.00 |  | 1.67 |  | 80,567.75 |  | 36.29 |  | 0.3952 |  | 1,906,465 |  |
| 1988 | 14,154,046.27 |  | 60.00 |  | 1.67 |  | 236,372.57 |  | 36.92 |  | 0.3847 |  | 5,444,637 |  |
| 1989 | 10,860,815.43 |  | 60.00 |  | 1.67 |  | 181,375.62 |  | 37.55 |  | 0.3742 |  | 4,063,791 |  |
| 1990 | 11,673,818.66 |  | 60.00 |  | 1.67 |  | 194,952.77 |  | 38.19 |  | 0.3635 |  | 4,243,433 |  |
| 1991 | 9,710,100.93 |  | 60.00 |  | 1.67 |  | 162,158.69 |  | 38.84 |  | 0.3527 |  | 3,424,461 |  |
| 1992 | 13,437,096.07 |  | 60.00 |  | 1.67 |  | 224,399.50 |  | 39.49 |  | 0.3418 |  | 4,593,203 |  |
| 1993 | 33,650,546.92 |  | 60.00 |  | 1.67 |  | 561,964.13 |  | 40.14 |  | 0.3310 |  | 11,138,331 |  |
| 1994 | 14,336,137.27 |  | 60.00 |  | 1.67 |  | 239,413.49 |  | 40.79 |  | 0.3202 |  | 4,590,001 |  |
| 1995 | 9,303,661.83 |  | 60.00 |  | 1.67 |  | 155,371.15 |  | 41.45 |  | 0.3092 |  | 2,876,413 |  |
| 1996 | 8,631,948.85 |  | 60.00 |  | 1.67 |  | 144,153.55 |  | 42.12 |  | 0.2980 |  | 2,572,321 |  |
| 1997 | 6,868,074.02 |  | 60.00 |  | 1.67 |  | 114,696.84 |  | 42.78 |  | 0.2870 |  | 1,971,137 |  |
| 1998 | 11,001,481.58 |  | 60.00 |  | 1.67 |  | 183,724.74 |  | 43.45 |  | 0.2758 |  | 3,034,539 |  |
| 1999 | 21,414,722.92 |  | 60.00 |  | 1.67 |  | 357,625.87 |  | 44.12 |  | 0.2647 |  | 5,667,835 |  |
| 2000 | 15,289,274.78 |  | 60.00 |  | 1.67 |  | 255,330.89 |  | 44.80 |  | 0.2533 |  | 3,873,232 |  |
| 2001 | 26,262,294.34 |  | 60.00 |  | 1.67 |  | 438,580.32 |  | 45.48 |  | 0.2420 |  | 6,355,475 |  |
| 2002 | 39,167,562.30 |  | 60.00 |  | 1.67 |  | 654,098.29 |  | 46.16 |  | 0.2307 |  | 9,034,782 |  |
| 2003 | 34,116,061.24 |  | 60.00 |  | 1.67 |  | 569,738.22 |  | 46.84 |  | 0.2193 |  | 7,482,676 |  |
| 2004 | 41,544,835.37 |  | 60.00 |  | 1.67 |  | 693,798.75 |  | 47.52 |  | 0.2080 |  | 8,641,326 |  |
| 2005 | 31,805,482.04 |  | 60.00 |  | 1.67 |  | 531,151.55 |  | 48.21 |  | 0.1965 |  | 6,249,777 |  |
| 2006 | 94,533,174.39 |  | 60.00 |  | 1.67 |  | 1,578,704.01 |  | 48.90 |  | 0.1850 |  | 17,488,637 |  |
| 2007 | 41,355,279.09 |  | 60.00 |  | 1.67 |  | 690,633.16 |  | 49.60 |  | 0.1733 |  | 7,168,111 |  |
| 2008 | 85,028,237.49 |  | 60.00 |  | 1.67 |  | 1,419,971.57 |  | 50.29 |  | 0.1618 |  | 13,760,120 |  |
| 2009 | 41,518,512.24 |  | 60.00 |  | 1.67 |  | 693,359.15 |  | 50.99 |  | 0.1502 |  | 6,234,835 |  |
| 2010 | 25,069,212.69 |  | 60.00 |  | 1.67 |  | 418,655.85 |  | 51.69 |  | 0.1385 |  | 3,472,086 |  |
| 2011 | 51,395,085.80 |  | 60.00 |  | 1.67 |  | 858,297.93 |  | 52.40 |  | 0.1267 |  | 6,510,216 |  |
| 2012 | 64,444,409.57 |  | 60.00 |  | 1.67 |  | 1,076,221.64 |  | 53.10 |  | 0.1150 |  | 7,411,107 |  |
| 2013 | 67,893,782.64 |  | 60.00 |  | 1.67 |  | 1,133,826.17 |  | 53.81 |  | 0.1032 |  | 7,004,602 |  |
| 2014 | 113,150,569.68 |  | 60.00 |  | 1.67 |  | 1,889,614.51 |  | 54.53 |  | 0.0912 |  | 10,315,937 |  |
| 2015 | 184,130,790.34 |  | 60.00 |  | 1.67 |  | 3,074,984.20 |  | 55.25 |  | 0.0792 |  | 14,577,635 |  |
| 2016 | 121,701,589.53 |  | 60.00 |  | 1.67 |  | 2,032,416.55 |  | 55.97 |  | 0.0672 |  | 8,174,696 |  |
| 2017 | 105,152,087.03 |  | 60.00 |  | 1.67 |  | 1,756,039.85 |  | 56.69 |  | 0.0552 |  | 5,801,241 |  |
| 2018 | 127,019,068.00 |  | 60.00 |  | 1.67 |  | 2,121,218.44 |  | 57.42 |  | 0.0430 |  | 5,461,820 |  |
| 2019 | 214,839,619.73 |  | 60.00 |  | 1.67 |  | 3,587,821.65 |  | 58.15 |  | 0.0308 |  | 6,623,505 |  |
| 2020 | 250,446,927.07 |  | 60.00 |  | 1.67 |  | 4,182,463.68 |  | 58.89 |  | 0.0185 |  | 4,633,268 |  |
| 2021 | 278,560,969.84 |  | 60.00 |  | 1.67 |  | 4,651,968.20 |  | 59.63 |  | 0.0062 |  | 1,718,721 |  |
|  | | | | | | | | | | | | | | |
|  | 2,338,863,733.28 |  |  | | | | 39,059,024.35 |  |  | | | | 280,966,396 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 60-R0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1929 | 22,340.71 |  | 60.00 |  | 1.67 |  | 373.09 |  | 11.99 |  | 0.8002 |  | 17,876 |  |
| 1930 | 2,263.57 |  | 60.00 |  | 1.67 |  | 37.80 |  | 12.39 |  | 0.7935 |  | 1,796 |  |
| 1941 | 14,360.49 |  | 60.00 |  | 1.67 |  | 239.82 |  | 16.81 |  | 0.7198 |  | 10,337 |  |
| 1942 | 40,413.35 |  | 60.00 |  | 1.67 |  | 674.90 |  | 17.23 |  | 0.7128 |  | 28,808 |  |
| 1943 | 2,136.02 |  | 60.00 |  | 1.67 |  | 35.67 |  | 17.64 |  | 0.7060 |  | 1,508 |  |
| 1944 | 122,591.80 |  | 60.00 |  | 1.67 |  | 2,047.28 |  | 18.06 |  | 0.6990 |  | 85,692 |  |
| 1945 | 3,108.39 |  | 60.00 |  | 1.67 |  | 51.91 |  | 18.48 |  | 0.6920 |  | 2,151 |  |
| 1946 | 511.61 |  | 60.00 |  | 1.67 |  | 8.54 |  | 18.91 |  | 0.6848 |  | 350 |  |
| 1947 | 205,329.33 |  | 60.00 |  | 1.67 |  | 3,429.00 |  | 19.34 |  | 0.6777 |  | 139,146 |  |
| 1948 | 3,099.00 |  | 60.00 |  | 1.67 |  | 51.75 |  | 19.77 |  | 0.6705 |  | 2,078 |  |
| 1949 | 36,717.83 |  | 60.00 |  | 1.67 |  | 613.19 |  | 20.20 |  | 0.6633 |  | 24,356 |  |
| 1950 | 22,106.57 |  | 60.00 |  | 1.67 |  | 369.18 |  | 20.63 |  | 0.6562 |  | 14,506 |  |
| 1951 | 181,454.34 |  | 60.00 |  | 1.67 |  | 3,030.29 |  | 21.07 |  | 0.6488 |  | 117,733 |  |
| 1952 | 408,430.07 |  | 60.00 |  | 1.67 |  | 6,820.78 |  | 21.52 |  | 0.6413 |  | 261,938 |  |
| 1953 | 594,019.28 |  | 60.00 |  | 1.67 |  | 9,920.12 |  | 21.96 |  | 0.6340 |  | 376,608 |  |
| 1954 | 625,085.10 |  | 60.00 |  | 1.67 |  | 10,438.92 |  | 22.41 |  | 0.6265 |  | 391,616 |  |
| 1955 | 227,427.38 |  | 60.00 |  | 1.67 |  | 3,798.04 |  | 22.87 |  | 0.6188 |  | 140,739 |  |
| 1956 | 256,330.64 |  | 60.00 |  | 1.67 |  | 4,280.72 |  | 23.32 |  | 0.6113 |  | 156,703 |  |
| 1957 | 1,584,353.81 |  | 60.00 |  | 1.67 |  | 26,458.71 |  | 23.79 |  | 0.6035 |  | 956,158 |  |
| 1958 | 750,212.65 |  | 60.00 |  | 1.67 |  | 12,528.55 |  | 24.25 |  | 0.5958 |  | 446,999 |  |
| 1959 | 356,666.27 |  | 60.00 |  | 1.67 |  | 5,956.33 |  | 24.72 |  | 0.5880 |  | 209,720 |  |
| 1960 | 1,594,218.16 |  | 60.00 |  | 1.67 |  | 26,623.44 |  | 25.19 |  | 0.5802 |  | 924,918 |  |
| 1961 | 522,597.26 |  | 60.00 |  | 1.67 |  | 8,727.37 |  | 25.67 |  | 0.5722 |  | 299,014 |  |
| 1962 | 3,016,772.86 |  | 60.00 |  | 1.67 |  | 50,380.11 |  | 26.15 |  | 0.5642 |  | 1,701,973 |  |
| 1963 | 1,990,655.78 |  | 60.00 |  | 1.67 |  | 33,243.95 |  | 26.63 |  | 0.5562 |  | 1,107,143 |  |
| 1964 | 927,185.02 |  | 60.00 |  | 1.67 |  | 15,483.99 |  | 27.12 |  | 0.5480 |  | 508,097 |  |
| 1965 | 2,675,982.07 |  | 60.00 |  | 1.67 |  | 44,688.90 |  | 27.61 |  | 0.5398 |  | 1,444,575 |  |
| 1966 | 5,549,388.40 |  | 60.00 |  | 1.67 |  | 92,674.79 |  | 28.10 |  | 0.5317 |  | 2,950,443 |  |
| 1967 | 5,607,459.83 |  | 60.00 |  | 1.67 |  | 93,644.58 |  | 28.60 |  | 0.5233 |  | 2,934,552 |  |
| 1968 | 2,359,241.68 |  | 60.00 |  | 1.67 |  | 39,399.34 |  | 29.10 |  | 0.5150 |  | 1,215,009 |  |
| 1969 | 790,852.12 |  | 60.00 |  | 1.67 |  | 13,207.23 |  | 29.61 |  | 0.5065 |  | 400,567 |  |
| 1970 | 2,165,767.72 |  | 60.00 |  | 1.67 |  | 36,168.32 |  | 30.12 |  | 0.4980 |  | 1,078,552 |  |
| 1971 | 4,322,668.73 |  | 60.00 |  | 1.67 |  | 72,188.57 |  | 30.64 |  | 0.4893 |  | 2,115,211 |  |
| 1972 | 5,303,304.92 |  | 60.00 |  | 1.67 |  | 88,565.19 |  | 31.15 |  | 0.4808 |  | 2,549,988 |  |
| 1973 | 4,708,458.23 |  | 60.00 |  | 1.67 |  | 78,631.25 |  | 31.68 |  | 0.4720 |  | 2,222,392 |  |
| 1974 | 13,105,192.44 |  | 60.00 |  | 1.67 |  | 218,856.71 |  | 32.20 |  | 0.4633 |  | 6,072,029 |  |
| 1975 | 6,383,344.34 |  | 60.00 |  | 1.67 |  | 106,601.85 |  | 32.73 |  | 0.4545 |  | 2,901,230 |  |
| 1976 | 3,984,180.73 |  | 60.00 |  | 1.67 |  | 66,535.82 |  | 33.26 |  | 0.4457 |  | 1,775,630 |  |
| 1977 | 3,663,619.10 |  | 60.00 |  | 1.67 |  | 61,182.44 |  | 33.80 |  | 0.4367 |  | 1,599,793 |  |
| 1978 | 3,747,972.25 |  | 60.00 |  | 1.67 |  | 62,591.14 |  | 34.34 |  | 0.4277 |  | 1,602,895 |  |
| 1979 | 7,932,514.06 |  | 60.00 |  | 1.67 |  | 132,472.98 |  | 34.88 |  | 0.4187 |  | 3,321,106 |  |
| 1980 | 16,230,054.58 |  | 60.00 |  | 1.67 |  | 271,041.91 |  | 35.43 |  | 0.4095 |  | 6,646,207 |  |
| 1981 | 3,454,049.16 |  | 60.00 |  | 1.67 |  | 57,682.62 |  | 35.98 |  | 0.4003 |  | 1,382,760 |  |
| 1982 | 3,756,644.48 |  | 60.00 |  | 1.67 |  | 62,735.96 |  | 36.54 |  | 0.3910 |  | 1,468,848 |  |
| 1983 | 3,235,621.85 |  | 60.00 |  | 1.67 |  | 54,034.88 |  | 37.09 |  | 0.3818 |  | 1,235,457 |  |
| 1984 | 5,057,703.50 |  | 60.00 |  | 1.67 |  | 84,463.65 |  | 37.65 |  | 0.3725 |  | 1,883,995 |  |
| 1985 | 1,718,843.78 |  | 60.00 |  | 1.67 |  | 28,704.69 |  | 38.21 |  | 0.3632 |  | 624,232 |  |
| 1986 | 4,748,127.93 |  | 60.00 |  | 1.67 |  | 79,293.74 |  | 38.78 |  | 0.3537 |  | 1,679,270 |  |
| 1987 | 6,297,027.23 |  | 60.00 |  | 1.67 |  | 105,160.35 |  | 39.35 |  | 0.3442 |  | 2,167,248 |  |
| 1988 | 14,414,851.95 |  | 60.00 |  | 1.67 |  | 240,728.03 |  | 39.92 |  | 0.3347 |  | 4,824,219 |  |
| 1989 | 7,402,196.16 |  | 60.00 |  | 1.67 |  | 123,616.68 |  | 40.49 |  | 0.3252 |  | 2,406,972 |  |
| 1990 | 9,315,989.35 |  | 60.00 |  | 1.67 |  | 155,577.02 |  | 41.07 |  | 0.3155 |  | 2,939,195 |  |
| 1991 | 6,607,824.61 |  | 60.00 |  | 1.67 |  | 110,350.67 |  | 41.65 |  | 0.3058 |  | 2,020,871 |  |
| 1992 | 8,194,407.33 |  | 60.00 |  | 1.67 |  | 136,846.60 |  | 42.23 |  | 0.2962 |  | 2,426,938 |  |
| 1993 | 25,325,567.07 |  | 60.00 |  | 1.67 |  | 422,936.97 |  | 42.81 |  | 0.2865 |  | 7,255,775 |  |
| 1994 | 22,127,918.16 |  | 60.00 |  | 1.67 |  | 369,536.23 |  | 43.40 |  | 0.2767 |  | 6,122,131 |  |
| 1995 | 7,436,426.02 |  | 60.00 |  | 1.67 |  | 124,188.31 |  | 43.98 |  | 0.2670 |  | 1,985,526 |  |
| 1996 | 25,669,452.11 |  | 60.00 |  | 1.67 |  | 428,679.85 |  | 44.57 |  | 0.2572 |  | 6,601,413 |  |
| 1997 | 5,749,953.98 |  | 60.00 |  | 1.67 |  | 96,024.23 |  | 45.16 |  | 0.2473 |  | 1,422,136 |  |
| 1998 | 7,766,475.43 |  | 60.00 |  | 1.67 |  | 129,700.14 |  | 45.75 |  | 0.2375 |  | 1,844,538 |  |
| 1999 | 12,459,600.17 |  | 60.00 |  | 1.67 |  | 208,075.32 |  | 46.35 |  | 0.2275 |  | 2,834,559 |  |
| 2000 | 11,211,875.59 |  | 60.00 |  | 1.67 |  | 187,238.32 |  | 46.94 |  | 0.2177 |  | 2,440,489 |  |
| 2001 | 24,404,988.93 |  | 60.00 |  | 1.67 |  | 407,563.32 |  | 47.54 |  | 0.2077 |  | 5,068,184 |  |
| 2002 | 31,314,574.52 |  | 60.00 |  | 1.67 |  | 522,953.39 |  | 48.13 |  | 0.1978 |  | 6,194,962 |  |
| 2003 | 28,354,762.13 |  | 60.00 |  | 1.67 |  | 473,524.53 |  | 48.73 |  | 0.1878 |  | 5,325,875 |  |
| 2004 | 23,337,914.00 |  | 60.00 |  | 1.67 |  | 389,743.16 |  | 49.33 |  | 0.1778 |  | 4,150,181 |  |
| 2005 | 20,690,665.96 |  | 60.00 |  | 1.67 |  | 345,534.12 |  | 49.93 |  | 0.1678 |  | 3,472,514 |  |
| 2006 | 43,765,485.05 |  | 60.00 |  | 1.67 |  | 730,883.60 |  | 50.53 |  | 0.1578 |  | 6,907,507 |  |
| 2007 | 19,602,700.66 |  | 60.00 |  | 1.67 |  | 327,365.10 |  | 51.13 |  | 0.1478 |  | 2,897,867 |  |
| 2008 | 38,638,773.48 |  | 60.00 |  | 1.67 |  | 645,267.52 |  | 51.73 |  | 0.1378 |  | 5,325,582 |  |
| 2009 | 23,900,935.32 |  | 60.00 |  | 1.67 |  | 399,145.62 |  | 52.34 |  | 0.1277 |  | 3,051,432 |  |
| 2010 | 18,095,209.62 |  | 60.00 |  | 1.67 |  | 302,190.00 |  | 52.94 |  | 0.1177 |  | 2,129,263 |  |
| 2011 | 30,336,748.03 |  | 60.00 |  | 1.67 |  | 506,623.69 |  | 53.55 |  | 0.1075 |  | 3,261,200 |  |
| 2012 | 21,278,644.80 |  | 60.00 |  | 1.67 |  | 355,353.37 |  | 54.16 |  | 0.0973 |  | 2,071,050 |  |
| 2013 | 34,375,124.52 |  | 60.00 |  | 1.67 |  | 574,064.58 |  | 54.77 |  | 0.0872 |  | 2,996,480 |  |
| 2014 | 56,690,035.55 |  | 60.00 |  | 1.67 |  | 946,723.59 |  | 55.38 |  | 0.0770 |  | 4,365,133 |  |
| 2015 | 54,661,923.88 |  | 60.00 |  | 1.67 |  | 912,854.13 |  | 55.99 |  | 0.0668 |  | 3,653,056 |  |
| 2016 | 44,749,253.97 |  | 60.00 |  | 1.67 |  | 747,312.54 |  | 56.60 |  | 0.0567 |  | 2,535,940 |  |
| 2017 | 47,489,000.59 |  | 60.00 |  | 1.67 |  | 793,066.31 |  | 57.22 |  | 0.0463 |  | 2,200,165 |  |
| 2018 | 62,177,414.13 |  | 60.00 |  | 1.67 |  | 1,038,362.82 |  | 57.83 |  | 0.0362 |  | 2,248,957 |  |
| 2019 | 302,144,088.74 |  | 60.00 |  | 1.67 |  | 5,045,806.28 |  | 58.45 |  | 0.0258 |  | 7,804,382 |  |
| 2020 | 121,424,743.85 |  | 60.00 |  | 1.67 |  | 2,027,793.22 |  | 59.07 |  | 0.0155 |  | 1,882,084 |  |
| 2021 | 174,215,816.07 |  | 60.00 |  | 1.67 |  | 2,909,404.13 |  | 59.69 |  | 0.0052 |  | 900,696 |  |
|  | | | | | | | | | | | | | | |
|  | 1,515,639,748.15 |  |  | | | | 25,311,183.75 |  |  | | | | 182,767,224 |  |
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|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 65-R4 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1949 | 297,085.20 |  | 65.00 |  | 1.54 |  | 4,575.11 |  | 6.61 |  | 0.8983 |  | 266,875 |  |
| 1954 | 126,798.36 |  | 65.00 |  | 1.54 |  | 1,952.69 |  | 8.42 |  | 0.8705 |  | 110,373 |  |
| 1958 | 576,819.26 |  | 65.00 |  | 1.54 |  | 8,883.02 |  | 10.24 |  | 0.8425 |  | 485,947 |  |
| 1959 | 842,175.95 |  | 65.00 |  | 1.54 |  | 12,969.51 |  | 10.75 |  | 0.8346 |  | 702,897 |  |
| 1962 | 305,843.02 |  | 65.00 |  | 1.54 |  | 4,709.98 |  | 12.45 |  | 0.8085 |  | 247,262 |  |
| 1964 | 489,305.36 |  | 65.00 |  | 1.54 |  | 7,535.30 |  | 13.69 |  | 0.7894 |  | 386,248 |  |
| 1966 | 1,787,419.08 |  | 65.00 |  | 1.54 |  | 27,526.25 |  | 15.00 |  | 0.7692 |  | 1,374,936 |  |
| 1967 | 516,322.80 |  | 65.00 |  | 1.54 |  | 7,951.37 |  | 15.67 |  | 0.7589 |  | 391,848 |  |
| 1968 | 819,629.95 |  | 65.00 |  | 1.54 |  | 12,622.30 |  | 16.36 |  | 0.7483 |  | 613,337 |  |
| 1970 | 2,008,865.68 |  | 65.00 |  | 1.54 |  | 30,936.53 |  | 17.76 |  | 0.7268 |  | 1,459,983 |  |
| 1971 | 908,879.73 |  | 65.00 |  | 1.54 |  | 13,996.75 |  | 18.48 |  | 0.7157 |  | 650,476 |  |
| 1972 | 4,244.12 |  | 65.00 |  | 1.54 |  | 65.36 |  | 19.20 |  | 0.7046 |  | 2,990 |  |
| 1973 | 2,850,139.29 |  | 65.00 |  | 1.54 |  | 43,892.15 |  | 19.94 |  | 0.6932 |  | 1,975,802 |  |
| 1974 | 5,764,765.73 |  | 65.00 |  | 1.54 |  | 88,777.39 |  | 20.69 |  | 0.6817 |  | 3,929,783 |  |
| 1976 | 153,796.31 |  | 65.00 |  | 1.54 |  | 2,368.46 |  | 22.23 |  | 0.6580 |  | 101,198 |  |
| 1977 | 1,056,630.60 |  | 65.00 |  | 1.54 |  | 16,272.11 |  | 23.02 |  | 0.6459 |  | 682,425 |  |
| 1980 | 960,673.51 |  | 65.00 |  | 1.54 |  | 14,794.37 |  | 25.44 |  | 0.6086 |  | 584,685 |  |
| 1981 | 2,818,900.46 |  | 65.00 |  | 1.54 |  | 43,411.07 |  | 26.27 |  | 0.5959 |  | 1,679,642 |  |
| 1982 | 1,664.23 |  | 65.00 |  | 1.54 |  | 25.63 |  | 27.12 |  | 0.5828 |  | 970 |  |
| 1983 | 646,035.04 |  | 65.00 |  | 1.54 |  | 9,948.94 |  | 27.97 |  | 0.5697 |  | 368,040 |  |
| 1984 | 796,959.34 |  | 65.00 |  | 1.54 |  | 12,273.17 |  | 28.83 |  | 0.5565 |  | 443,476 |  |
| 1985 | 195,844.22 |  | 65.00 |  | 1.54 |  | 3,016.00 |  | 29.70 |  | 0.5431 |  | 106,359 |  |
| 1986 | 122,741.10 |  | 65.00 |  | 1.54 |  | 1,890.21 |  | 30.58 |  | 0.5295 |  | 64,996 |  |
| 1987 | 210,393.47 |  | 65.00 |  | 1.54 |  | 3,240.06 |  | 31.47 |  | 0.5159 |  | 108,531 |  |
| 1988 | 541,317.59 |  | 65.00 |  | 1.54 |  | 8,336.29 |  | 32.37 |  | 0.5020 |  | 271,741 |  |
| 1989 | 11,876.53 |  | 65.00 |  | 1.54 |  | 182.90 |  | 33.28 |  | 0.4880 |  | 5,796 |  |
| 1990 | 52,122.16 |  | 65.00 |  | 1.54 |  | 802.68 |  | 34.20 |  | 0.4739 |  | 24,698 |  |
| 1991 | 270,129.13 |  | 65.00 |  | 1.54 |  | 4,159.99 |  | 35.12 |  | 0.4597 |  | 124,176 |  |
| 1992 | 38,648.23 |  | 65.00 |  | 1.54 |  | 595.18 |  | 36.05 |  | 0.4454 |  | 17,213 |  |
| 1993 | 337,003.29 |  | 65.00 |  | 1.54 |  | 5,189.85 |  | 36.99 |  | 0.4309 |  | 145,221 |  |
| 1994 | 2,647,627.58 |  | 65.00 |  | 1.54 |  | 40,773.46 |  | 37.93 |  | 0.4165 |  | 1,102,631 |  |
| 1995 | 2,009.90 |  | 65.00 |  | 1.54 |  | 30.95 |  | 38.88 |  | 0.4019 |  | 808 |  |
| 1996 | 825,525.17 |  | 65.00 |  | 1.54 |  | 12,713.09 |  | 39.83 |  | 0.3872 |  | 319,668 |  |
| 1997 | 1,744,364.17 |  | 65.00 |  | 1.54 |  | 26,863.21 |  | 40.79 |  | 0.3725 |  | 649,706 |  |
| 1998 | 32,324.04 |  | 65.00 |  | 1.54 |  | 497.79 |  | 41.75 |  | 0.3577 |  | 11,562 |  |
| 1999 | 4,047,328.87 |  | 65.00 |  | 1.54 |  | 62,328.86 |  | 42.72 |  | 0.3428 |  | 1,387,303 |  |
| 2000 | 32,230.65 |  | 65.00 |  | 1.54 |  | 496.35 |  | 43.69 |  | 0.3279 |  | 10,567 |  |
| 2001 | 4,420,147.25 |  | 65.00 |  | 1.54 |  | 68,070.27 |  | 44.66 |  | 0.3129 |  | 1,383,152 |  |
| 2002 | 203,620.47 |  | 65.00 |  | 1.54 |  | 3,135.76 |  | 45.64 |  | 0.2979 |  | 60,648 |  |
| 2003 | 3,305,490.60 |  | 65.00 |  | 1.54 |  | 50,904.56 |  | 46.62 |  | 0.2828 |  | 934,694 |  |
| 2006 | 6,144,118.86 |  | 65.00 |  | 1.54 |  | 94,619.43 |  | 49.57 |  | 0.2374 |  | 1,458,491 |  |
| 2009 | 16,335,084.95 |  | 65.00 |  | 1.54 |  | 251,560.31 |  | 52.54 |  | 0.1917 |  | 3,131,272 |  |
| 2012 | 75,609.40 |  | 65.00 |  | 1.54 |  | 1,164.38 |  | 55.52 |  | 0.1459 |  | 11,028 |  |
| 2013 | 24,298.59 |  | 65.00 |  | 1.54 |  | 374.20 |  | 56.52 |  | 0.1305 |  | 3,170 |  |
| 2014 | 21,036.88 |  | 65.00 |  | 1.54 |  | 323.97 |  | 57.51 |  | 0.1152 |  | 2,424 |  |
| 2016 | 70,704,145.08 |  | 65.00 |  | 1.54 |  | 1,088,843.83 |  | 59.51 |  | 0.0845 |  | 5,971,672 |  |
| 2018 | 146,562.46 |  | 65.00 |  | 1.54 |  | 2,257.06 |  | 61.50 |  | 0.0539 |  | 7,892 |  |
| 2019 | 58,517.23 |  | 65.00 |  | 1.54 |  | 901.17 |  | 62.50 |  | 0.0385 |  | 2,251 |  |
| 2020 | 4,197,160.73 |  | 65.00 |  | 1.54 |  | 64,636.28 |  | 63.50 |  | 0.0231 |  | 96,870 |  |
| 2021 | 17,295,540.84 |  | 65.00 |  | 1.54 |  | 266,351.33 |  | 64.50 |  | 0.0077 |  | 133,003 |  |
|  | | | | | | | | | | | | | | |
|  | 157,775,772.46 |  |  | | | | 2,429,746.88 |  |  | | | | 34,006,736 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 65-R3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 25,285.56 |  | 65.00 |  | 1.54 |  | 389.40 |  | 7.43 |  | 0.8857 |  | 22,395 |  |
| 1942 | 1,276.58 |  | 65.00 |  | 1.54 |  | 19.66 |  | 7.71 |  | 0.8814 |  | 1,125 |  |
| 1946 | 2,362.45 |  | 65.00 |  | 1.54 |  | 36.38 |  | 8.95 |  | 0.8623 |  | 2,037 |  |
| 1949 | 9,735.32 |  | 65.00 |  | 1.54 |  | 149.92 |  | 9.99 |  | 0.8463 |  | 8,239 |  |
| 1950 | 1,555.35 |  | 65.00 |  | 1.54 |  | 23.95 |  | 10.36 |  | 0.8406 |  | 1,307 |  |
| 1953 | 15,083.62 |  | 65.00 |  | 1.54 |  | 232.29 |  | 11.56 |  | 0.8222 |  | 12,401 |  |
| 1954 | 47,778.88 |  | 65.00 |  | 1.54 |  | 735.79 |  | 11.99 |  | 0.8155 |  | 38,966 |  |
| 1956 | 31,909.11 |  | 65.00 |  | 1.54 |  | 491.40 |  | 12.88 |  | 0.8019 |  | 25,586 |  |
| 1958 | 608,602.99 |  | 65.00 |  | 1.54 |  | 9,372.49 |  | 13.84 |  | 0.7871 |  | 479,019 |  |
| 1959 | 561,359.78 |  | 65.00 |  | 1.54 |  | 8,644.94 |  | 14.33 |  | 0.7795 |  | 437,602 |  |
| 1960 | 5,167.60 |  | 65.00 |  | 1.54 |  | 79.58 |  | 14.85 |  | 0.7715 |  | 3,987 |  |
| 1961 | 167,030.82 |  | 65.00 |  | 1.54 |  | 2,572.27 |  | 15.38 |  | 0.7634 |  | 127,508 |  |
| 1962 | 331,366.46 |  | 65.00 |  | 1.54 |  | 5,103.04 |  | 15.92 |  | 0.7551 |  | 250,208 |  |
| 1964 | 909,548.14 |  | 65.00 |  | 1.54 |  | 14,007.04 |  | 17.05 |  | 0.7377 |  | 670,965 |  |
| 1966 | 1,657,691.41 |  | 65.00 |  | 1.54 |  | 25,528.45 |  | 18.23 |  | 0.7195 |  | 1,192,775 |  |
| 1967 | 434,984.70 |  | 65.00 |  | 1.54 |  | 6,698.76 |  | 18.84 |  | 0.7102 |  | 308,904 |  |
| 1968 | 1,101,010.88 |  | 65.00 |  | 1.54 |  | 16,955.57 |  | 19.46 |  | 0.7006 |  | 771,390 |  |
| 1969 | 1,954.79 |  | 65.00 |  | 1.54 |  | 30.10 |  | 20.10 |  | 0.6908 |  | 1,350 |  |
| 1970 | 2,439,010.30 |  | 65.00 |  | 1.54 |  | 37,560.76 |  | 20.75 |  | 0.6808 |  | 1,660,405 |  |
| 1971 | 715,957.24 |  | 65.00 |  | 1.54 |  | 11,025.74 |  | 21.41 |  | 0.6706 |  | 480,135 |  |
| 1972 | 325,304.75 |  | 65.00 |  | 1.54 |  | 5,009.69 |  | 22.08 |  | 0.6603 |  | 214,802 |  |
| 1973 | 2,101,611.10 |  | 65.00 |  | 1.54 |  | 32,364.81 |  | 22.76 |  | 0.6499 |  | 1,365,732 |  |
| 1974 | 3,886,494.88 |  | 65.00 |  | 1.54 |  | 59,852.02 |  | 23.45 |  | 0.6392 |  | 2,484,364 |  |
| 1976 | 261,269.72 |  | 65.00 |  | 1.54 |  | 4,023.55 |  | 24.87 |  | 0.6174 |  | 161,303 |  |
| 1977 | 3,022,351.87 |  | 65.00 |  | 1.54 |  | 46,544.22 |  | 25.59 |  | 0.6063 |  | 1,832,482 |  |
| 1980 | 592,278.38 |  | 65.00 |  | 1.54 |  | 9,121.09 |  | 27.82 |  | 0.5720 |  | 338,783 |  |
| 1981 | 663,512.96 |  | 65.00 |  | 1.54 |  | 10,218.10 |  | 28.58 |  | 0.5603 |  | 371,773 |  |
| 1982 | 1,797.58 |  | 65.00 |  | 1.54 |  | 27.68 |  | 29.35 |  | 0.5485 |  | 986 |  |
| 1983 | 2,391,511.83 |  | 65.00 |  | 1.54 |  | 36,829.28 |  | 30.13 |  | 0.5365 |  | 1,282,950 |  |
| 1984 | 1,041,821.90 |  | 65.00 |  | 1.54 |  | 16,044.06 |  | 30.91 |  | 0.5245 |  | 546,394 |  |
| 1985 | 394,807.23 |  | 65.00 |  | 1.54 |  | 6,080.03 |  | 31.71 |  | 0.5122 |  | 202,201 |  |
| 1986 | 2,156,915.23 |  | 65.00 |  | 1.54 |  | 33,216.49 |  | 32.51 |  | 0.4999 |  | 1,078,134 |  |
| 1988 | 3,091,813.87 |  | 65.00 |  | 1.54 |  | 47,613.93 |  | 34.14 |  | 0.4748 |  | 1,467,900 |  |
| 1989 | 11,205,816.07 |  | 65.00 |  | 1.54 |  | 172,569.57 |  | 34.96 |  | 0.4622 |  | 5,178,768 |  |
| 1991 | 419,870.16 |  | 65.00 |  | 1.54 |  | 6,466.00 |  | 36.64 |  | 0.4363 |  | 183,194 |  |
| 1992 | 44,423.39 |  | 65.00 |  | 1.54 |  | 684.12 |  | 37.49 |  | 0.4232 |  | 18,801 |  |
| 1993 | 2,644,111.60 |  | 65.00 |  | 1.54 |  | 40,719.32 |  | 38.34 |  | 0.4102 |  | 1,084,482 |  |
| 1994 | 779,238.94 |  | 65.00 |  | 1.54 |  | 12,000.28 |  | 39.21 |  | 0.3968 |  | 309,179 |  |
| 1995 | 155,651.95 |  | 65.00 |  | 1.54 |  | 2,397.04 |  | 40.08 |  | 0.3834 |  | 59,674 |  |
| 1996 | 1,660,414.17 |  | 65.00 |  | 1.54 |  | 25,570.38 |  | 40.95 |  | 0.3700 |  | 614,353 |  |
| 1997 | 2,047,230.12 |  | 65.00 |  | 1.54 |  | 31,527.34 |  | 41.83 |  | 0.3565 |  | 729,756 |  |
| 1998 | 45,001.49 |  | 65.00 |  | 1.54 |  | 693.02 |  | 42.72 |  | 0.3428 |  | 15,425 |  |
| 1999 | 3,511,503.83 |  | 65.00 |  | 1.54 |  | 54,077.16 |  | 43.62 |  | 0.3289 |  | 1,155,004 |  |
| 2000 | 274,984.78 |  | 65.00 |  | 1.54 |  | 4,234.77 |  | 44.52 |  | 0.3151 |  | 86,642 |  |
| 2001 | 2,003,904.86 |  | 65.00 |  | 1.54 |  | 30,860.13 |  | 45.43 |  | 0.3011 |  | 603,336 |  |
| 2002 | 685,738.05 |  | 65.00 |  | 1.54 |  | 10,560.37 |  | 46.34 |  | 0.2871 |  | 196,862 |  |
| 2003 | 1,549,668.39 |  | 65.00 |  | 1.54 |  | 23,864.89 |  | 47.26 |  | 0.2729 |  | 422,935 |  |
| 2004 | 2,023,118.28 |  | 65.00 |  | 1.54 |  | 31,156.02 |  | 48.18 |  | 0.2588 |  | 523,522 |  |
| 2005 | 766,554.19 |  | 65.00 |  | 1.54 |  | 11,804.93 |  | 49.11 |  | 0.2445 |  | 187,392 |  |
| 2006 | 8,398,426.52 |  | 65.00 |  | 1.54 |  | 129,335.77 |  | 50.05 |  | 0.2300 |  | 1,931,638 |  |
| 2007 | 1,633,254.70 |  | 65.00 |  | 1.54 |  | 25,152.12 |  | 50.99 |  | 0.2155 |  | 352,032 |  |
| 2008 | 1,897,478.15 |  | 65.00 |  | 1.54 |  | 29,221.16 |  | 51.93 |  | 0.2011 |  | 381,545 |  |
| 2009 | 21,514,752.26 |  | 65.00 |  | 1.54 |  | 331,327.18 |  | 52.88 |  | 0.1865 |  | 4,011,641 |  |
| 2010 | 71,264.32 |  | 65.00 |  | 1.54 |  | 1,097.47 |  | 53.83 |  | 0.1719 |  | 12,247 |  |
| 2011 | 535,203.76 |  | 65.00 |  | 1.54 |  | 8,242.14 |  | 54.78 |  | 0.1572 |  | 84,150 |  |
| 2012 | 3,942,985.69 |  | 65.00 |  | 1.54 |  | 60,721.98 |  | 55.74 |  | 0.1425 |  | 561,718 |  |
| 2013 | 1,644,104.12 |  | 65.00 |  | 1.54 |  | 25,319.20 |  | 56.71 |  | 0.1275 |  | 209,689 |  |
| 2014 | 1,818,973.33 |  | 65.00 |  | 1.54 |  | 28,012.19 |  | 57.67 |  | 0.1128 |  | 205,126 |  |
| 2015 | 2,411,463.93 |  | 65.00 |  | 1.54 |  | 37,136.54 |  | 58.64 |  | 0.0979 |  | 235,962 |  |
| 2016 | 56,272,750.76 |  | 65.00 |  | 1.54 |  | 866,600.36 |  | 59.61 |  | 0.0829 |  | 4,666,136 |  |
| 2017 | 8,210,181.06 |  | 65.00 |  | 1.54 |  | 126,436.79 |  | 60.59 |  | 0.0679 |  | 557,061 |  |
| 2018 | 4,180,789.17 |  | 65.00 |  | 1.54 |  | 64,384.15 |  | 61.56 |  | 0.0529 |  | 221,247 |  |
| 2019 | 2,046,420.19 |  | 65.00 |  | 1.54 |  | 31,514.87 |  | 62.54 |  | 0.0379 |  | 77,457 |  |
| 2020 | 9,156,936.76 |  | 65.00 |  | 1.54 |  | 141,016.83 |  | 63.52 |  | 0.0228 |  | 208,503 |  |
| 2021 | 23,020,018.89 |  | 65.00 |  | 1.54 |  | 354,508.29 |  | 64.51 |  | 0.0075 |  | 173,571 |  |
|  | | | | | | | | | | | | | | |
|  | 205,572,397.16 |  |  | | | | 3,165,814.86 |  |  | | | | 43,103,156 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.54 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 75-R4 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1944 | 2,368.89 |  | 75.00 |  | 1.33 |  | 31.51 |  | 9.88 |  | 0.8683 |  | 2,057 |  |
| 1952 | 1,353.82 |  | 75.00 |  | 1.33 |  | 18.01 |  | 13.86 |  | 0.8152 |  | 1,104 |  |
| 1953 | 15,833.17 |  | 75.00 |  | 1.33 |  | 210.58 |  | 14.46 |  | 0.8072 |  | 12,781 |  |
| 1954 | 24,231.26 |  | 75.00 |  | 1.33 |  | 322.28 |  | 15.07 |  | 0.7991 |  | 19,362 |  |
| 1955 | 5,298.47 |  | 75.00 |  | 1.33 |  | 70.47 |  | 15.70 |  | 0.7907 |  | 4,189 |  |
| 1956 | 14,681.48 |  | 75.00 |  | 1.33 |  | 195.26 |  | 16.34 |  | 0.7821 |  | 11,483 |  |
| 1957 | 387,396.06 |  | 75.00 |  | 1.33 |  | 5,152.37 |  | 17.00 |  | 0.7733 |  | 299,585 |  |
| 1958 | 110,200.32 |  | 75.00 |  | 1.33 |  | 1,465.66 |  | 17.67 |  | 0.7644 |  | 84,237 |  |
| 1959 | 50,434.07 |  | 75.00 |  | 1.33 |  | 670.77 |  | 18.35 |  | 0.7553 |  | 38,094 |  |
| 1960 | 199,458.40 |  | 75.00 |  | 1.33 |  | 2,652.80 |  | 19.03 |  | 0.7463 |  | 148,850 |  |
| 1961 | 26,385.55 |  | 75.00 |  | 1.33 |  | 350.93 |  | 19.73 |  | 0.7369 |  | 19,444 |  |
| 1962 | 57,933.94 |  | 75.00 |  | 1.33 |  | 770.52 |  | 20.44 |  | 0.7275 |  | 42,145 |  |
| 1963 | 49,549.53 |  | 75.00 |  | 1.33 |  | 659.01 |  | 21.15 |  | 0.7180 |  | 35,577 |  |
| 1964 | 10,646.11 |  | 75.00 |  | 1.33 |  | 141.59 |  | 21.88 |  | 0.7083 |  | 7,540 |  |
| 1965 | 103,371.45 |  | 75.00 |  | 1.33 |  | 1,374.84 |  | 22.61 |  | 0.6985 |  | 72,208 |  |
| 1966 | 459,791.44 |  | 75.00 |  | 1.33 |  | 6,115.23 |  | 23.36 |  | 0.6885 |  | 316,580 |  |
| 1967 | 175,654.98 |  | 75.00 |  | 1.33 |  | 2,336.21 |  | 24.11 |  | 0.6785 |  | 119,187 |  |
| 1968 | 2,349.01 |  | 75.00 |  | 1.33 |  | 31.24 |  | 24.88 |  | 0.6683 |  | 1,570 |  |
| 1969 | 162,231.14 |  | 75.00 |  | 1.33 |  | 2,157.67 |  | 25.65 |  | 0.6580 |  | 106,748 |  |
| 1970 | 24,839.77 |  | 75.00 |  | 1.33 |  | 330.37 |  | 26.44 |  | 0.6475 |  | 16,083 |  |
| 1971 | 223,390.08 |  | 75.00 |  | 1.33 |  | 2,971.09 |  | 27.23 |  | 0.6369 |  | 142,284 |  |
| 1972 | 326,141.72 |  | 75.00 |  | 1.33 |  | 4,337.68 |  | 28.04 |  | 0.6261 |  | 204,207 |  |
| 1973 | 637,317.49 |  | 75.00 |  | 1.33 |  | 8,476.32 |  | 28.85 |  | 0.6153 |  | 392,161 |  |
| 1974 | 2,912,708.45 |  | 75.00 |  | 1.33 |  | 38,739.02 |  | 29.68 |  | 0.6043 |  | 1,760,062 |  |
| 1975 | 709,801.60 |  | 75.00 |  | 1.33 |  | 9,440.36 |  | 30.51 |  | 0.5932 |  | 421,054 |  |
| 1976 | 749,777.91 |  | 75.00 |  | 1.33 |  | 9,972.05 |  | 31.35 |  | 0.5820 |  | 436,371 |  |
| 1977 | 675,263.49 |  | 75.00 |  | 1.33 |  | 8,981.00 |  | 32.21 |  | 0.5705 |  | 385,258 |  |
| 1978 | 315,471.58 |  | 75.00 |  | 1.33 |  | 4,195.77 |  | 33.07 |  | 0.5591 |  | 176,371 |  |
| 1979 | 2,767,462.88 |  | 75.00 |  | 1.33 |  | 36,807.26 |  | 33.94 |  | 0.5475 |  | 1,515,103 |  |
| 1980 | 8,096,521.12 |  | 75.00 |  | 1.33 |  | 107,683.73 |  | 34.81 |  | 0.5359 |  | 4,338,683 |  |
| 1981 | 1,707,077.26 |  | 75.00 |  | 1.33 |  | 22,704.13 |  | 35.70 |  | 0.5240 |  | 894,508 |  |
| 1982 | 3,023,165.20 |  | 75.00 |  | 1.33 |  | 40,208.10 |  | 36.59 |  | 0.5121 |  | 1,548,254 |  |
| 1983 | 3,032,384.24 |  | 75.00 |  | 1.33 |  | 40,330.71 |  | 37.49 |  | 0.5001 |  | 1,516,586 |  |
| 1984 | 2,248,349.71 |  | 75.00 |  | 1.33 |  | 29,903.05 |  | 38.40 |  | 0.4880 |  | 1,097,195 |  |
| 1985 | 1,228,989.38 |  | 75.00 |  | 1.33 |  | 16,345.56 |  | 39.32 |  | 0.4757 |  | 584,667 |  |
| 1986 | 148,967.13 |  | 75.00 |  | 1.33 |  | 1,981.26 |  | 40.24 |  | 0.4635 |  | 69,042 |  |
| 1987 | 456,530.80 |  | 75.00 |  | 1.33 |  | 6,071.86 |  | 41.16 |  | 0.4512 |  | 205,987 |  |
| 1988 | 2,411,707.20 |  | 75.00 |  | 1.33 |  | 32,075.71 |  | 42.10 |  | 0.4387 |  | 1,057,944 |  |
| 1989 | 413,450.66 |  | 75.00 |  | 1.33 |  | 5,498.89 |  | 43.04 |  | 0.4261 |  | 176,184 |  |
| 1990 | 1,167,976.98 |  | 75.00 |  | 1.33 |  | 15,534.09 |  | 43.98 |  | 0.4136 |  | 483,075 |  |
| 1991 | 249,268.87 |  | 75.00 |  | 1.33 |  | 3,315.28 |  | 44.93 |  | 0.4009 |  | 99,939 |  |
| 1992 | 204,183.13 |  | 75.00 |  | 1.33 |  | 2,715.64 |  | 45.88 |  | 0.3883 |  | 79,278 |  |
| 1993 | 3,920,311.16 |  | 75.00 |  | 1.33 |  | 52,140.14 |  | 46.84 |  | 0.3755 |  | 1,471,959 |  |
| 1994 | 5,483,659.90 |  | 75.00 |  | 1.33 |  | 72,932.68 |  | 47.80 |  | 0.3627 |  | 1,988,759 |  |
| 1995 | 29,141.16 |  | 75.00 |  | 1.33 |  | 387.58 |  | 48.77 |  | 0.3497 |  | 10,192 |  |
| 1996 | 19,362,350.59 |  | 75.00 |  | 1.33 |  | 257,519.26 |  | 49.73 |  | 0.3369 |  | 6,523,757 |  |
| 1997 | 208,010.63 |  | 75.00 |  | 1.33 |  | 2,766.54 |  | 50.71 |  | 0.3239 |  | 67,368 |  |
| 1998 | 282,784.82 |  | 75.00 |  | 1.33 |  | 3,761.04 |  | 51.68 |  | 0.3109 |  | 87,926 |  |
| 1999 | 1,014,469.93 |  | 75.00 |  | 1.33 |  | 13,492.45 |  | 52.66 |  | 0.2979 |  | 302,180 |  |
| 2000 | 213,925.46 |  | 75.00 |  | 1.33 |  | 2,845.21 |  | 53.64 |  | 0.2848 |  | 60,926 |  |
| 2001 | 257,630.63 |  | 75.00 |  | 1.33 |  | 3,426.49 |  | 54.62 |  | 0.2717 |  | 70,006 |  |
| 2002 | 1,075,487.77 |  | 75.00 |  | 1.33 |  | 14,303.99 |  | 55.60 |  | 0.2587 |  | 278,196 |  |
| 2003 | 600,710.24 |  | 75.00 |  | 1.33 |  | 7,989.45 |  | 56.59 |  | 0.2455 |  | 147,456 |  |
| 2004 | 653,676.22 |  | 75.00 |  | 1.33 |  | 8,693.89 |  | 57.58 |  | 0.2323 |  | 151,829 |  |
| 2005 | 845,719.75 |  | 75.00 |  | 1.33 |  | 11,248.07 |  | 58.57 |  | 0.2191 |  | 185,272 |  |
| 2006 | 3,539,976.55 |  | 75.00 |  | 1.33 |  | 47,081.69 |  | 59.56 |  | 0.2059 |  | 728,775 |  |
| 2007 | 2,797,064.53 |  | 75.00 |  | 1.33 |  | 37,200.96 |  | 60.55 |  | 0.1927 |  | 538,910 |  |
| 2008 | 12,229,331.29 |  | 75.00 |  | 1.33 |  | 162,650.11 |  | 61.54 |  | 0.1795 |  | 2,194,798 |  |
| 2009 | 1,221,823.73 |  | 75.00 |  | 1.33 |  | 16,250.26 |  | 62.53 |  | 0.1663 |  | 203,153 |  |
| 2010 | 65,832.69 |  | 75.00 |  | 1.33 |  | 875.57 |  | 63.53 |  | 0.1529 |  | 10,068 |  |
| 2011 | 414,563.09 |  | 75.00 |  | 1.33 |  | 5,513.69 |  | 64.52 |  | 0.1397 |  | 57,927 |  |
| 2012 | 305,794.98 |  | 75.00 |  | 1.33 |  | 4,067.07 |  | 65.52 |  | 0.1264 |  | 38,652 |  |
| 2013 | 76,008.55 |  | 75.00 |  | 1.33 |  | 1,010.91 |  | 66.52 |  | 0.1131 |  | 8,594 |  |
| 2014 | 362,443.51 |  | 75.00 |  | 1.33 |  | 4,820.50 |  | 67.51 |  | 0.0999 |  | 36,197 |  |
| 2015 | 3,462,915.35 |  | 75.00 |  | 1.33 |  | 46,056.77 |  | 68.51 |  | 0.0865 |  | 299,646 |  |
| 2016 | 125,687.22 |  | 75.00 |  | 1.33 |  | 1,671.64 |  | 69.51 |  | 0.0732 |  | 9,200 |  |
| 2017 | 9,285,290.63 |  | 75.00 |  | 1.33 |  | 123,494.37 |  | 70.51 |  | 0.0599 |  | 555,910 |  |
| 2018 | 5,559,520.77 |  | 75.00 |  | 1.33 |  | 73,941.63 |  | 71.50 |  | 0.0467 |  | 259,463 |  |
| 2019 | 4,300,616.02 |  | 75.00 |  | 1.33 |  | 57,198.19 |  | 72.50 |  | 0.0333 |  | 143,340 |  |
| 2020 | 4,492,242.81 |  | 75.00 |  | 1.33 |  | 59,746.83 |  | 73.50 |  | 0.0200 |  | 89,845 |  |
| 2021 | 15,257,452.11 |  | 75.00 |  | 1.33 |  | 202,924.11 |  | 74.50 |  | 0.0067 |  | 101,767 |  |
|  | | | | | | | | | | | | | | |
|  | 133,034,357.83 |  |  | | | | 1,769,356.97 |  |  | | | | 35,565,108 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.33 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 70-R2.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1926 | 790.68 |  | 70.00 |  | 1.43 |  | 11.31 |  | 8.43 |  | 0.8796 |  | 695 |  |
| 1941 | 32,448.23 |  | 70.00 |  | 1.43 |  | 464.01 |  | 12.58 |  | 0.8203 |  | 26,617 |  |
| 1942 | 1,931.64 |  | 70.00 |  | 1.43 |  | 27.62 |  | 12.92 |  | 0.8154 |  | 1,575 |  |
| 1946 | 1,894.12 |  | 70.00 |  | 1.43 |  | 27.09 |  | 14.39 |  | 0.7944 |  | 1,505 |  |
| 1947 | 84.55 |  | 70.00 |  | 1.43 |  | 1.21 |  | 14.79 |  | 0.7887 |  | 67 |  |
| 1948 | 50.63 |  | 70.00 |  | 1.43 |  | 0.72 |  | 15.20 |  | 0.7829 |  | 40 |  |
| 1949 | 10,531.03 |  | 70.00 |  | 1.43 |  | 150.59 |  | 15.62 |  | 0.7769 |  | 8,181 |  |
| 1950 | 95,435.89 |  | 70.00 |  | 1.43 |  | 1,364.73 |  | 16.05 |  | 0.7707 |  | 73,553 |  |
| 1951 | 2,561.82 |  | 70.00 |  | 1.43 |  | 36.63 |  | 16.50 |  | 0.7643 |  | 1,958 |  |
| 1953 | 13,275.35 |  | 70.00 |  | 1.43 |  | 189.84 |  | 17.43 |  | 0.7510 |  | 9,970 |  |
| 1954 | 8,451.30 |  | 70.00 |  | 1.43 |  | 120.85 |  | 17.91 |  | 0.7441 |  | 6,289 |  |
| 1955 | 30,675.50 |  | 70.00 |  | 1.43 |  | 438.66 |  | 18.41 |  | 0.7370 |  | 22,608 |  |
| 1956 | 112,495.86 |  | 70.00 |  | 1.43 |  | 1,608.69 |  | 18.92 |  | 0.7297 |  | 82,089 |  |
| 1957 | 14,369.82 |  | 70.00 |  | 1.43 |  | 205.49 |  | 19.44 |  | 0.7223 |  | 10,379 |  |
| 1958 | 140,852.08 |  | 70.00 |  | 1.43 |  | 2,014.18 |  | 19.97 |  | 0.7147 |  | 100,668 |  |
| 1959 | 57,073.55 |  | 70.00 |  | 1.43 |  | 816.15 |  | 20.52 |  | 0.7069 |  | 40,343 |  |
| 1960 | 103,077.63 |  | 70.00 |  | 1.43 |  | 1,474.01 |  | 21.07 |  | 0.6990 |  | 72,051 |  |
| 1961 | 224,104.04 |  | 70.00 |  | 1.43 |  | 3,204.69 |  | 21.64 |  | 0.6909 |  | 154,825 |  |
| 1962 | 57,032.83 |  | 70.00 |  | 1.43 |  | 815.57 |  | 22.22 |  | 0.6826 |  | 38,929 |  |
| 1963 | 160,739.27 |  | 70.00 |  | 1.43 |  | 2,298.57 |  | 22.81 |  | 0.6741 |  | 108,361 |  |
| 1964 | 182,529.41 |  | 70.00 |  | 1.43 |  | 2,610.17 |  | 23.41 |  | 0.6656 |  | 121,486 |  |
| 1965 | 287,892.55 |  | 70.00 |  | 1.43 |  | 4,116.86 |  | 24.02 |  | 0.6569 |  | 189,105 |  |
| 1966 | 364,406.96 |  | 70.00 |  | 1.43 |  | 5,211.02 |  | 24.64 |  | 0.6480 |  | 236,136 |  |
| 1967 | 311,354.67 |  | 70.00 |  | 1.43 |  | 4,452.37 |  | 25.27 |  | 0.6390 |  | 198,956 |  |
| 1968 | 882,303.37 |  | 70.00 |  | 1.43 |  | 12,616.94 |  | 25.91 |  | 0.6299 |  | 555,728 |  |
| 1969 | 240,653.19 |  | 70.00 |  | 1.43 |  | 3,441.34 |  | 26.56 |  | 0.6206 |  | 149,342 |  |
| 1970 | 1,219,980.76 |  | 70.00 |  | 1.43 |  | 17,445.72 |  | 27.22 |  | 0.6111 |  | 745,579 |  |
| 1971 | 648,395.79 |  | 70.00 |  | 1.43 |  | 9,272.06 |  | 27.88 |  | 0.6017 |  | 390,146 |  |
| 1972 | 1,354,834.98 |  | 70.00 |  | 1.43 |  | 19,374.14 |  | 28.56 |  | 0.5920 |  | 802,062 |  |
| 1973 | 957,302.14 |  | 70.00 |  | 1.43 |  | 13,689.42 |  | 29.24 |  | 0.5823 |  | 557,427 |  |
| 1974 | 1,274,931.70 |  | 70.00 |  | 1.43 |  | 18,231.52 |  | 29.94 |  | 0.5723 |  | 729,631 |  |
| 1975 | 1,821,815.93 |  | 70.00 |  | 1.43 |  | 26,051.97 |  | 30.64 |  | 0.5623 |  | 1,024,389 |  |
| 1976 | 1,403,633.70 |  | 70.00 |  | 1.43 |  | 20,071.96 |  | 31.35 |  | 0.5521 |  | 775,002 |  |
| 1977 | 460,776.58 |  | 70.00 |  | 1.43 |  | 6,589.11 |  | 32.06 |  | 0.5420 |  | 249,741 |  |
| 1978 | 525,994.02 |  | 70.00 |  | 1.43 |  | 7,521.71 |  | 32.79 |  | 0.5316 |  | 279,603 |  |
| 1979 | 626,211.65 |  | 70.00 |  | 1.43 |  | 8,954.83 |  | 33.52 |  | 0.5211 |  | 326,344 |  |
| 1980 | 1,948,613.49 |  | 70.00 |  | 1.43 |  | 27,865.17 |  | 34.26 |  | 0.5106 |  | 994,904 |  |
| 1981 | 1,358,757.59 |  | 70.00 |  | 1.43 |  | 19,430.23 |  | 35.01 |  | 0.4999 |  | 679,189 |  |
| 1982 | 2,200,284.25 |  | 70.00 |  | 1.43 |  | 31,464.06 |  | 35.76 |  | 0.4891 |  | 1,076,247 |  |
| 1983 | 1,211,323.86 |  | 70.00 |  | 1.43 |  | 17,321.93 |  | 36.52 |  | 0.4783 |  | 579,364 |  |
| 1984 | 3,167,727.54 |  | 70.00 |  | 1.43 |  | 45,298.50 |  | 37.29 |  | 0.4673 |  | 1,480,247 |  |
| 1985 | 2,059,473.71 |  | 70.00 |  | 1.43 |  | 29,450.47 |  | 38.06 |  | 0.4563 |  | 939,717 |  |
| 1986 | 2,588,537.42 |  | 70.00 |  | 1.43 |  | 37,016.09 |  | 38.85 |  | 0.4450 |  | 1,151,899 |  |
| 1987 | 2,995,722.89 |  | 70.00 |  | 1.43 |  | 42,838.84 |  | 39.63 |  | 0.4339 |  | 1,299,724 |  |
| 1988 | 2,115,720.04 |  | 70.00 |  | 1.43 |  | 30,254.80 |  | 40.43 |  | 0.4224 |  | 893,744 |  |
| 1989 | 2,867,510.21 |  | 70.00 |  | 1.43 |  | 41,005.40 |  | 41.23 |  | 0.4110 |  | 1,178,547 |  |
| 1990 | 5,056,066.76 |  | 70.00 |  | 1.43 |  | 72,301.75 |  | 42.03 |  | 0.3996 |  | 2,020,253 |  |
| 1991 | 4,868,308.41 |  | 70.00 |  | 1.43 |  | 69,616.81 |  | 42.85 |  | 0.3879 |  | 1,888,222 |  |
| 1992 | 5,606,567.52 |  | 70.00 |  | 1.43 |  | 80,173.92 |  | 43.67 |  | 0.3761 |  | 2,108,854 |  |
| 1993 | 9,773,081.51 |  | 70.00 |  | 1.43 |  | 139,755.07 |  | 44.49 |  | 0.3644 |  | 3,561,604 |  |
| 1994 | 3,246,149.10 |  | 70.00 |  | 1.43 |  | 46,419.93 |  | 45.32 |  | 0.3526 |  | 1,144,495 |  |
| 1995 | 2,717,142.15 |  | 70.00 |  | 1.43 |  | 38,855.13 |  | 46.16 |  | 0.3406 |  | 925,377 |  |
| 1996 | 1,288,880.52 |  | 70.00 |  | 1.43 |  | 18,430.99 |  | 47.00 |  | 0.3286 |  | 423,487 |  |
| 1997 | 1,375,375.50 |  | 70.00 |  | 1.43 |  | 19,667.87 |  | 47.85 |  | 0.3164 |  | 435,210 |  |
| 1998 | 2,212,758.11 |  | 70.00 |  | 1.43 |  | 31,642.44 |  | 48.70 |  | 0.3043 |  | 673,320 |  |
| 1999 | 4,537,783.46 |  | 70.00 |  | 1.43 |  | 64,890.30 |  | 49.56 |  | 0.2920 |  | 1,325,033 |  |
| 2000 | 8,816,602.62 |  | 70.00 |  | 1.43 |  | 126,077.42 |  | 50.42 |  | 0.2797 |  | 2,466,092 |  |
| 2001 | 6,208,095.69 |  | 70.00 |  | 1.43 |  | 88,775.77 |  | 51.29 |  | 0.2673 |  | 1,659,362 |  |
| 2002 | 8,902,526.82 |  | 70.00 |  | 1.43 |  | 127,306.13 |  | 52.16 |  | 0.2549 |  | 2,268,898 |  |
| 2003 | 11,822,359.27 |  | 70.00 |  | 1.43 |  | 169,059.74 |  | 53.04 |  | 0.2423 |  | 2,864,439 |  |
| 2004 | 7,433,569.31 |  | 70.00 |  | 1.43 |  | 106,300.04 |  | 53.93 |  | 0.2296 |  | 1,706,525 |  |
| 2005 | 9,615,969.32 |  | 70.00 |  | 1.43 |  | 137,508.36 |  | 54.81 |  | 0.2170 |  | 2,086,665 |  |
| 2006 | 14,244,383.67 |  | 70.00 |  | 1.43 |  | 203,694.69 |  | 55.70 |  | 0.2043 |  | 2,909,985 |  |
| 2007 | 17,022,734.25 |  | 70.00 |  | 1.43 |  | 243,425.10 |  | 56.60 |  | 0.1914 |  | 3,258,662 |  |
| 2008 | 6,219,053.32 |  | 70.00 |  | 1.43 |  | 88,932.46 |  | 57.50 |  | 0.1786 |  | 1,110,536 |  |
| 2009 | 11,051,601.23 |  | 70.00 |  | 1.43 |  | 158,037.90 |  | 58.41 |  | 0.1656 |  | 1,829,814 |  |
| 2010 | 10,936,322.66 |  | 70.00 |  | 1.43 |  | 156,389.41 |  | 59.31 |  | 0.1527 |  | 1,670,086 |  |
| 2011 | 3,672,551.47 |  | 70.00 |  | 1.43 |  | 52,517.49 |  | 60.23 |  | 0.1396 |  | 512,578 |  |
| 2012 | 6,091,808.20 |  | 70.00 |  | 1.43 |  | 87,112.86 |  | 61.14 |  | 0.1266 |  | 771,040 |  |
| 2013 | 6,461,946.14 |  | 70.00 |  | 1.43 |  | 92,405.83 |  | 62.06 |  | 0.1134 |  | 732,979 |  |
| 2014 | 4,585,422.59 |  | 70.00 |  | 1.43 |  | 65,571.54 |  | 62.98 |  | 0.1003 |  | 459,872 |  |
| 2015 | 8,918,310.92 |  | 70.00 |  | 1.43 |  | 127,531.85 |  | 63.91 |  | 0.0870 |  | 775,893 |  |
| 2016 | 11,307,250.09 |  | 70.00 |  | 1.43 |  | 161,693.68 |  | 64.84 |  | 0.0737 |  | 833,457 |  |
| 2017 | 24,686,852.59 |  | 70.00 |  | 1.43 |  | 353,021.99 |  | 65.77 |  | 0.0604 |  | 1,491,827 |  |
| 2018 | 18,197,140.39 |  | 70.00 |  | 1.43 |  | 260,219.11 |  | 66.71 |  | 0.0470 |  | 855,266 |  |
| 2019 | 16,884,580.69 |  | 70.00 |  | 1.43 |  | 241,449.50 |  | 67.64 |  | 0.0337 |  | 569,179 |  |
| 2020 | 31,178,621.91 |  | 70.00 |  | 1.43 |  | 445,854.29 |  | 68.58 |  | 0.0203 |  | 632,614 |  |
| 2021 | 42,336,591.55 |  | 70.00 |  | 1.43 |  | 605,413.26 |  | 69.53 |  | 0.0067 |  | 284,079 |  |
|  | | | | | | | | | | | | | | |
|  | 363,420,971.96 |  |  | | | | 5,196,919.87 |  |  | | | | 64,620,665 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.43 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 49-S0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1938 | 193.53 |  | 49.00 |  | 2.04 |  | 3.95 |  | 4.98 |  | 0.8984 |  | 174 |  |
| 1939 | 193.86 |  | 49.00 |  | 2.04 |  | 3.95 |  | 5.32 |  | 0.8914 |  | 173 |  |
| 1941 | 30,005.06 |  | 49.00 |  | 2.04 |  | 612.10 |  | 5.99 |  | 0.8778 |  | 26,337 |  |
| 1942 | 18,968.73 |  | 49.00 |  | 2.04 |  | 386.96 |  | 6.32 |  | 0.8710 |  | 16,522 |  |
| 1943 | 774.02 |  | 49.00 |  | 2.04 |  | 15.79 |  | 6.66 |  | 0.8641 |  | 669 |  |
| 1944 | 1,290.76 |  | 49.00 |  | 2.04 |  | 26.33 |  | 7.00 |  | 0.8571 |  | 1,106 |  |
| 1945 | 8,708.20 |  | 49.00 |  | 2.04 |  | 177.65 |  | 7.34 |  | 0.8502 |  | 7,404 |  |
| 1946 | 58,323.75 |  | 49.00 |  | 2.04 |  | 1,189.80 |  | 7.68 |  | 0.8433 |  | 49,183 |  |
| 1947 | 31,292.04 |  | 49.00 |  | 2.04 |  | 638.36 |  | 8.02 |  | 0.8363 |  | 26,170 |  |
| 1948 | 87,114.21 |  | 49.00 |  | 2.04 |  | 1,777.13 |  | 8.36 |  | 0.8294 |  | 72,252 |  |
| 1949 | 154,228.28 |  | 49.00 |  | 2.04 |  | 3,146.26 |  | 8.71 |  | 0.8222 |  | 126,813 |  |
| 1950 | 126,396.30 |  | 49.00 |  | 2.04 |  | 2,578.48 |  | 9.05 |  | 0.8153 |  | 103,052 |  |
| 1951 | 163,479.31 |  | 49.00 |  | 2.04 |  | 3,334.98 |  | 9.40 |  | 0.8082 |  | 132,117 |  |
| 1952 | 98,689.32 |  | 49.00 |  | 2.04 |  | 2,013.26 |  | 9.75 |  | 0.8010 |  | 79,052 |  |
| 1953 | 478,315.63 |  | 49.00 |  | 2.04 |  | 9,757.64 |  | 10.10 |  | 0.7939 |  | 379,725 |  |
| 1954 | 448,930.36 |  | 49.00 |  | 2.04 |  | 9,158.18 |  | 10.46 |  | 0.7865 |  | 353,097 |  |
| 1955 | 516,409.85 |  | 49.00 |  | 2.04 |  | 10,534.76 |  | 10.82 |  | 0.7792 |  | 402,376 |  |
| 1956 | 582,482.75 |  | 49.00 |  | 2.04 |  | 11,882.65 |  | 11.18 |  | 0.7718 |  | 449,583 |  |
| 1957 | 319,672.07 |  | 49.00 |  | 2.04 |  | 6,521.31 |  | 11.54 |  | 0.7645 |  | 244,386 |  |
| 1958 | 1,416,890.70 |  | 49.00 |  | 2.04 |  | 28,904.57 |  | 11.91 |  | 0.7569 |  | 1,072,501 |  |
| 1959 | 824,843.57 |  | 49.00 |  | 2.04 |  | 16,826.81 |  | 12.27 |  | 0.7496 |  | 618,294 |  |
| 1960 | 928,407.91 |  | 49.00 |  | 2.04 |  | 18,939.52 |  | 12.65 |  | 0.7418 |  | 688,730 |  |
| 1961 | 682,778.21 |  | 49.00 |  | 2.04 |  | 13,928.68 |  | 13.02 |  | 0.7343 |  | 501,357 |  |
| 1962 | 1,308,829.00 |  | 49.00 |  | 2.04 |  | 26,700.11 |  | 13.40 |  | 0.7265 |  | 950,904 |  |
| 1963 | 1,379,940.28 |  | 49.00 |  | 2.04 |  | 28,150.78 |  | 13.78 |  | 0.7188 |  | 991,873 |  |
| 1964 | 2,162,589.41 |  | 49.00 |  | 2.04 |  | 44,116.82 |  | 14.17 |  | 0.7108 |  | 1,537,212 |  |
| 1965 | 2,657,579.66 |  | 49.00 |  | 2.04 |  | 54,214.63 |  | 14.56 |  | 0.7029 |  | 1,867,906 |  |
| 1966 | 2,983,980.82 |  | 49.00 |  | 2.04 |  | 60,873.21 |  | 14.95 |  | 0.6949 |  | 2,073,568 |  |
| 1967 | 4,049,267.37 |  | 49.00 |  | 2.04 |  | 82,605.05 |  | 15.35 |  | 0.6867 |  | 2,780,753 |  |
| 1968 | 8,378,907.21 |  | 49.00 |  | 2.04 |  | 170,929.71 |  | 15.75 |  | 0.6786 |  | 5,685,675 |  |
| 1969 | 2,858,571.70 |  | 49.00 |  | 2.04 |  | 58,314.86 |  | 16.15 |  | 0.6704 |  | 1,916,415 |  |
| 1970 | 9,189,542.65 |  | 49.00 |  | 2.04 |  | 187,466.67 |  | 16.56 |  | 0.6620 |  | 6,083,845 |  |
| 1971 | 6,306,048.00 |  | 49.00 |  | 2.04 |  | 128,643.38 |  | 16.98 |  | 0.6535 |  | 4,120,813 |  |
| 1972 | 9,921,980.10 |  | 49.00 |  | 2.04 |  | 202,408.39 |  | 17.40 |  | 0.6449 |  | 6,398,685 |  |
| 1973 | 7,064,600.92 |  | 49.00 |  | 2.04 |  | 144,117.86 |  | 17.82 |  | 0.6363 |  | 4,495,418 |  |
| 1974 | 11,411,304.17 |  | 49.00 |  | 2.04 |  | 232,790.61 |  | 18.25 |  | 0.6276 |  | 7,161,164 |  |
| 1975 | 11,377,879.25 |  | 49.00 |  | 2.04 |  | 232,108.74 |  | 18.68 |  | 0.6188 |  | 7,040,404 |  |
| 1976 | 4,978,279.68 |  | 49.00 |  | 2.04 |  | 101,556.91 |  | 19.12 |  | 0.6098 |  | 3,035,755 |  |
| 1977 | 3,548,632.75 |  | 49.00 |  | 2.04 |  | 72,392.11 |  | 19.57 |  | 0.6006 |  | 2,131,344 |  |
| 1978 | 4,043,908.00 |  | 49.00 |  | 2.04 |  | 82,495.72 |  | 20.02 |  | 0.5914 |  | 2,391,689 |  |
| 1979 | 5,613,826.78 |  | 49.00 |  | 2.04 |  | 114,522.07 |  | 20.48 |  | 0.5820 |  | 3,267,472 |  |
| 1980 | 10,582,282.48 |  | 49.00 |  | 2.04 |  | 215,878.56 |  | 20.94 |  | 0.5727 |  | 6,059,944 |  |
| 1981 | 11,289,394.34 |  | 49.00 |  | 2.04 |  | 230,303.64 |  | 21.41 |  | 0.5631 |  | 6,356,606 |  |
| 1982 | 16,197,748.99 |  | 49.00 |  | 2.04 |  | 330,434.08 |  | 21.88 |  | 0.5535 |  | 8,964,968 |  |
| 1983 | 9,302,752.52 |  | 49.00 |  | 2.04 |  | 189,776.15 |  | 22.37 |  | 0.5435 |  | 5,055,767 |  |
| 1984 | 10,603,217.66 |  | 49.00 |  | 2.04 |  | 216,305.64 |  | 22.86 |  | 0.5335 |  | 5,656,499 |  |
| 1985 | 13,153,931.75 |  | 49.00 |  | 2.04 |  | 268,340.21 |  | 23.35 |  | 0.5235 |  | 6,885,689 |  |
| 1986 | 15,522,862.22 |  | 49.00 |  | 2.04 |  | 316,666.39 |  | 23.86 |  | 0.5131 |  | 7,964,160 |  |
| 1987 | 20,624,912.48 |  | 49.00 |  | 2.04 |  | 420,748.21 |  | 24.37 |  | 0.5027 |  | 10,367,112 |  |
| 1988 | 23,064,982.30 |  | 49.00 |  | 2.04 |  | 470,525.64 |  | 24.89 |  | 0.4920 |  | 11,348,894 |  |
| 1989 | 45,140,019.09 |  | 49.00 |  | 2.04 |  | 920,856.39 |  | 25.42 |  | 0.4812 |  | 21,722,280 |  |
| 1990 | 54,378,840.74 |  | 49.00 |  | 2.04 |  | 1,109,328.35 |  | 25.95 |  | 0.4704 |  | 25,580,350 |  |
| 1991 | 57,365,535.68 |  | 49.00 |  | 2.04 |  | 1,170,256.93 |  | 26.50 |  | 0.4592 |  | 26,341,107 |  |
| 1992 | 55,041,333.61 |  | 49.00 |  | 2.04 |  | 1,122,843.21 |  | 27.05 |  | 0.4480 |  | 24,656,316 |  |
| 1993 | 35,786,021.91 |  | 49.00 |  | 2.04 |  | 730,034.85 |  | 27.62 |  | 0.4363 |  | 15,614,515 |  |
| 1994 | 23,788,675.26 |  | 49.00 |  | 2.04 |  | 485,288.98 |  | 28.19 |  | 0.4247 |  | 10,102,812 |  |
| 1995 | 14,474,908.85 |  | 49.00 |  | 2.04 |  | 295,288.14 |  | 28.77 |  | 0.4129 |  | 5,976,111 |  |
| 1996 | 17,028,100.05 |  | 49.00 |  | 2.04 |  | 347,373.24 |  | 29.37 |  | 0.4006 |  | 6,821,627 |  |
| 1997 | 27,723,018.08 |  | 49.00 |  | 2.04 |  | 565,549.57 |  | 29.97 |  | 0.3884 |  | 10,766,789 |  |
| 1998 | 27,501,136.36 |  | 49.00 |  | 2.04 |  | 561,023.18 |  | 30.58 |  | 0.3759 |  | 10,338,227 |  |
| 1999 | 43,022,401.27 |  | 49.00 |  | 2.04 |  | 877,656.99 |  | 31.21 |  | 0.3631 |  | 15,619,713 |  |
| 2000 | 58,195,414.45 |  | 49.00 |  | 2.04 |  | 1,187,186.45 |  | 31.84 |  | 0.3502 |  | 20,380,034 |  |
| 2001 | 53,486,531.26 |  | 49.00 |  | 2.04 |  | 1,091,125.24 |  | 32.49 |  | 0.3369 |  | 18,021,752 |  |
| 2002 | 71,054,251.17 |  | 49.00 |  | 2.04 |  | 1,449,506.72 |  | 33.15 |  | 0.3235 |  | 22,983,919 |  |
| 2003 | 70,485,316.07 |  | 49.00 |  | 2.04 |  | 1,437,900.45 |  | 33.83 |  | 0.3096 |  | 21,821,549 |  |
| 2004 | 52,284,494.79 |  | 49.00 |  | 2.04 |  | 1,066,603.69 |  | 34.51 |  | 0.2957 |  | 15,461,048 |  |
| 2005 | 60,508,632.64 |  | 49.00 |  | 2.04 |  | 1,234,376.11 |  | 35.21 |  | 0.2814 |  | 17,028,944 |  |
| 2006 | 67,485,854.36 |  | 49.00 |  | 2.04 |  | 1,376,711.43 |  | 35.92 |  | 0.2669 |  | 18,014,674 |  |
| 2007 | 59,444,145.97 |  | 49.00 |  | 2.04 |  | 1,212,660.58 |  | 36.65 |  | 0.2520 |  | 14,982,303 |  |
| 2008 | 50,918,559.96 |  | 49.00 |  | 2.04 |  | 1,038,738.62 |  | 37.39 |  | 0.2369 |  | 12,064,644 |  |
| 2009 | 47,542,809.51 |  | 49.00 |  | 2.04 |  | 969,873.31 |  | 38.15 |  | 0.2214 |  | 10,527,404 |  |
| 2010 | 28,965,916.03 |  | 49.00 |  | 2.04 |  | 590,904.69 |  | 38.92 |  | 0.2057 |  | 5,958,579 |  |
| 2011 | 67,115,637.47 |  | 49.00 |  | 2.04 |  | 1,369,159.00 |  | 39.70 |  | 0.1898 |  | 12,738,548 |  |
| 2012 | 47,674,357.86 |  | 49.00 |  | 2.04 |  | 972,556.90 |  | 40.50 |  | 0.1735 |  | 8,270,071 |  |
| 2013 | 72,201,402.06 |  | 49.00 |  | 2.04 |  | 1,472,908.60 |  | 41.32 |  | 0.1567 |  | 11,316,126 |  |
| 2014 | 89,266,523.63 |  | 49.00 |  | 2.04 |  | 1,821,037.08 |  | 42.16 |  | 0.1396 |  | 12,460,714 |  |
| 2015 | 104,124,636.24 |  | 49.00 |  | 2.04 |  | 2,124,142.58 |  | 43.01 |  | 0.1222 |  | 12,728,196 |  |
| 2016 | 133,207,120.26 |  | 49.00 |  | 2.04 |  | 2,717,425.25 |  | 43.88 |  | 0.1045 |  | 13,918,812 |  |
| 2017 | 167,953,629.76 |  | 49.00 |  | 2.04 |  | 3,426,254.05 |  | 44.76 |  | 0.0865 |  | 14,533,028 |  |
| 2018 | 168,278,315.39 |  | 49.00 |  | 2.04 |  | 3,432,877.63 |  | 45.67 |  | 0.0680 |  | 11,436,194 |  |
| 2019 | 204,681,622.27 |  | 49.00 |  | 2.04 |  | 4,175,505.09 |  | 46.59 |  | 0.0492 |  | 10,066,242 |  |
| 2020 | 224,868,466.72 |  | 49.00 |  | 2.04 |  | 4,587,316.72 |  | 47.54 |  | 0.0298 |  | 6,701,080 |  |
| 2021 | 488,253,796.79 |  | 49.00 |  | 2.04 |  | 9,960,377.45 |  | 48.51 |  | 0.0100 |  | 4,882,538 |  |
|  | | | | | | | | | | | | | | |
|  | 3,025,803,566.47 |  |  | | | | 61,726,392.74 |  |  | | | | 607,777,853 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.04 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 20-S3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 2016 | 2,483,237.33 |  | 20.00 |  | 5.00 |  | 124,161.87 |  | 14.51 |  | 0.2745 |  | 681,649 |  |
| 2017 | 1,328,854.45 |  | 20.00 |  | 5.00 |  | 66,442.72 |  | 15.50 |  | 0.2250 |  | 298,992 |  |
| 2019 | 293,632.38 |  | 20.00 |  | 5.00 |  | 14,681.62 |  | 17.50 |  | 0.1250 |  | 36,704 |  |
| 2020 | 49.05 |  | 20.00 |  | 5.00 |  | 2.45 |  | 18.50 |  | 0.0750 |  | 4 |  |
| 2021 | 145,177.73 |  | 20.00 |  | 5.00 |  | 7,258.89 |  | 19.50 |  | 0.0250 |  | 3,629 |  |
|  | | | | | | | | | | | | | | |
|  | 4,250,950.94 |  |  | | | | 212,547.55 |  |  | | | | 1,020,978 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 5.00 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 40-R2 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1927 | 177.50 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 178 |  |
| 1928 | 1,049.03 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 1,049 |  |
| 1929 | 631.59 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 632 |  |
| 1930 | 871.15 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 871 |  |
| 1931 | 614.69 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 615 |  |
| 1932 | 713.12 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 713 |  |
| 1933 | 446.88 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 447 |  |
| 1934 | 725.56 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 726 |  |
| 1935 | 1,403.55 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 1,404 |  |
| 1936 | 2,918.50 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 2,918 |  |
| 1937 | 3,882.97 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 3,883 |  |
| 1938 | 4,900.32 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,900 |  |
| 1939 | 4,214.67 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,215 |  |
| 1940 | 4,618.35 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,618 |  |
| 1941 | 4,722.53 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,723 |  |
| 1942 | 5,518.35 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 5,518 |  |
| 1943 | 3,155.92 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 3,156 |  |
| 1944 | 4,534.36 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,534 |  |
| 1945 | 18,918.99 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 18,919 |  |
| 1946 | 36,618.86 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 36,619 |  |
| 1947 | 42,577.73 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 42,578 |  |
| 1948 | 48,129.50 |  | 40.00 |  | 2.50 |  | 1,203.24 |  | 0.21 |  | 0.9948 |  | 47,877 |  |
| 1949 | 53,449.38 |  | 40.00 |  | 2.50 |  | 1,336.23 |  | 0.46 |  | 0.9885 |  | 52,835 |  |
| 1950 | 55,792.53 |  | 40.00 |  | 2.50 |  | 1,394.81 |  | 0.72 |  | 0.9820 |  | 54,788 |  |
| 1951 | 55,191.19 |  | 40.00 |  | 2.50 |  | 1,379.78 |  | 0.98 |  | 0.9755 |  | 53,839 |  |
| 1952 | 64,328.35 |  | 40.00 |  | 2.50 |  | 1,608.21 |  | 1.24 |  | 0.9690 |  | 62,334 |  |
| 1953 | 84,016.89 |  | 40.00 |  | 2.50 |  | 2,100.42 |  | 1.51 |  | 0.9623 |  | 80,845 |  |
| 1954 | 92,321.90 |  | 40.00 |  | 2.50 |  | 2,308.05 |  | 1.79 |  | 0.9553 |  | 88,190 |  |
| 1955 | 110,473.35 |  | 40.00 |  | 2.50 |  | 2,761.83 |  | 2.07 |  | 0.9483 |  | 104,756 |  |
| 1956 | 137,273.22 |  | 40.00 |  | 2.50 |  | 3,431.83 |  | 2.35 |  | 0.9413 |  | 129,208 |  |
| 1957 | 283,109.93 |  | 40.00 |  | 2.50 |  | 7,077.75 |  | 2.63 |  | 0.9343 |  | 264,495 |  |
| 1958 | 154,221.66 |  | 40.00 |  | 2.50 |  | 3,855.54 |  | 2.92 |  | 0.9270 |  | 142,963 |  |
| 1959 | 187,971.01 |  | 40.00 |  | 2.50 |  | 4,699.28 |  | 3.21 |  | 0.9198 |  | 172,886 |  |
| 1960 | 176,801.25 |  | 40.00 |  | 2.50 |  | 4,420.03 |  | 3.50 |  | 0.9125 |  | 161,331 |  |
| 1961 | 185,273.24 |  | 40.00 |  | 2.50 |  | 4,631.83 |  | 3.79 |  | 0.9053 |  | 167,719 |  |
| 1962 | 206,394.02 |  | 40.00 |  | 2.50 |  | 5,159.85 |  | 4.08 |  | 0.8980 |  | 185,342 |  |
| 1963 | 473,939.42 |  | 40.00 |  | 2.50 |  | 11,848.49 |  | 4.37 |  | 0.8908 |  | 422,162 |  |
| 1964 | 492,298.40 |  | 40.00 |  | 2.50 |  | 12,307.46 |  | 4.67 |  | 0.8833 |  | 434,823 |  |
| 1965 | 677,889.45 |  | 40.00 |  | 2.50 |  | 16,947.24 |  | 4.96 |  | 0.8760 |  | 593,831 |  |
| 1966 | 673,408.73 |  | 40.00 |  | 2.50 |  | 16,835.22 |  | 5.26 |  | 0.8685 |  | 584,855 |  |
| 1967 | 849,219.43 |  | 40.00 |  | 2.50 |  | 21,230.49 |  | 5.56 |  | 0.8610 |  | 731,178 |  |
| 1968 | 1,065,255.38 |  | 40.00 |  | 2.50 |  | 26,631.38 |  | 5.87 |  | 0.8533 |  | 908,929 |  |
| 1969 | 1,036,675.65 |  | 40.00 |  | 2.50 |  | 25,916.89 |  | 6.19 |  | 0.8453 |  | 876,250 |  |
| 1970 | 1,896,122.85 |  | 40.00 |  | 2.50 |  | 47,403.07 |  | 6.51 |  | 0.8373 |  | 1,587,529 |  |
| 1971 | 1,823,119.67 |  | 40.00 |  | 2.50 |  | 45,577.99 |  | 6.84 |  | 0.8290 |  | 1,511,366 |  |
| 1972 | 2,305,138.10 |  | 40.00 |  | 2.50 |  | 57,628.45 |  | 7.19 |  | 0.8203 |  | 1,890,790 |  |
| 1973 | 2,844,917.11 |  | 40.00 |  | 2.50 |  | 71,122.93 |  | 7.54 |  | 0.8115 |  | 2,308,650 |  |
| 1974 | 2,899,506.93 |  | 40.00 |  | 2.50 |  | 72,487.67 |  | 7.90 |  | 0.8025 |  | 2,326,854 |  |
| 1975 | 3,250,353.14 |  | 40.00 |  | 2.50 |  | 81,258.83 |  | 8.28 |  | 0.7930 |  | 2,577,530 |  |
| 1976 | 2,458,063.25 |  | 40.00 |  | 2.50 |  | 61,451.58 |  | 8.67 |  | 0.7833 |  | 1,925,278 |  |
| 1977 | 3,037,668.35 |  | 40.00 |  | 2.50 |  | 75,941.71 |  | 9.07 |  | 0.7733 |  | 2,348,877 |  |
| 1978 | 4,148,103.80 |  | 40.00 |  | 2.50 |  | 103,702.60 |  | 9.49 |  | 0.7628 |  | 3,163,966 |  |
| 1979 | 8,006,483.65 |  | 40.00 |  | 2.50 |  | 200,162.09 |  | 9.92 |  | 0.7520 |  | 6,020,876 |  |
| 1980 | 8,160,640.51 |  | 40.00 |  | 2.50 |  | 204,016.01 |  | 10.37 |  | 0.7408 |  | 6,044,994 |  |
| 1981 | 7,795,466.50 |  | 40.00 |  | 2.50 |  | 194,886.66 |  | 10.83 |  | 0.7293 |  | 5,684,844 |  |
| 1982 | 7,443,793.44 |  | 40.00 |  | 2.50 |  | 186,094.84 |  | 11.31 |  | 0.7173 |  | 5,339,061 |  |
| 1983 | 10,400,826.00 |  | 40.00 |  | 2.50 |  | 260,020.65 |  | 11.80 |  | 0.7050 |  | 7,332,582 |  |
| 1984 | 12,148,725.73 |  | 40.00 |  | 2.50 |  | 303,718.14 |  | 12.30 |  | 0.6925 |  | 8,412,993 |  |
| 1985 | 14,305,647.52 |  | 40.00 |  | 2.50 |  | 357,641.19 |  | 12.82 |  | 0.6795 |  | 9,720,687 |  |
| 1986 | 14,960,256.71 |  | 40.00 |  | 2.50 |  | 374,006.42 |  | 13.36 |  | 0.6660 |  | 9,963,531 |  |
| 1987 | 14,697,727.94 |  | 40.00 |  | 2.50 |  | 367,443.20 |  | 13.91 |  | 0.6523 |  | 9,586,593 |  |
| 1988 | 15,398,765.87 |  | 40.00 |  | 2.50 |  | 384,969.15 |  | 14.47 |  | 0.6383 |  | 9,828,262 |  |
| 1989 | 18,229,148.67 |  | 40.00 |  | 2.50 |  | 455,728.72 |  | 15.05 |  | 0.6238 |  | 11,370,431 |  |
| 1990 | 19,597,328.95 |  | 40.00 |  | 2.50 |  | 489,933.22 |  | 15.64 |  | 0.6090 |  | 11,934,773 |  |
| 1991 | 17,676,265.72 |  | 40.00 |  | 2.50 |  | 441,906.64 |  | 16.25 |  | 0.5938 |  | 10,495,283 |  |
| 1992 | 18,201,622.27 |  | 40.00 |  | 2.50 |  | 455,040.56 |  | 16.87 |  | 0.5783 |  | 10,525,088 |  |
| 1993 | 22,010,540.17 |  | 40.00 |  | 2.50 |  | 550,263.50 |  | 17.50 |  | 0.5625 |  | 12,380,929 |  |
| 1994 | 17,665,613.63 |  | 40.00 |  | 2.50 |  | 441,640.34 |  | 18.15 |  | 0.5463 |  | 9,649,841 |  |
| 1995 | 18,222,930.27 |  | 40.00 |  | 2.50 |  | 455,573.26 |  | 18.81 |  | 0.5298 |  | 9,653,597 |  |
| 1996 | 16,696,136.11 |  | 40.00 |  | 2.50 |  | 417,403.40 |  | 19.48 |  | 0.5130 |  | 8,565,118 |  |
| 1997 | 17,118,140.09 |  | 40.00 |  | 2.50 |  | 427,953.50 |  | 20.16 |  | 0.4960 |  | 8,490,597 |  |
| 1998 | 23,693,721.74 |  | 40.00 |  | 2.50 |  | 592,343.04 |  | 20.86 |  | 0.4785 |  | 11,337,446 |  |
| 1999 | 23,003,511.00 |  | 40.00 |  | 2.50 |  | 575,087.78 |  | 21.56 |  | 0.4610 |  | 10,604,619 |  |
| 2000 | 24,949,902.81 |  | 40.00 |  | 2.50 |  | 623,747.57 |  | 22.28 |  | 0.4430 |  | 11,052,807 |  |
| 2001 | 26,437,751.58 |  | 40.00 |  | 2.50 |  | 660,943.79 |  | 23.01 |  | 0.4248 |  | 11,229,435 |  |
| 2002 | 29,486,757.38 |  | 40.00 |  | 2.50 |  | 737,168.93 |  | 23.75 |  | 0.4063 |  | 11,978,995 |  |
| 2003 | 30,457,052.98 |  | 40.00 |  | 2.50 |  | 761,426.32 |  | 24.50 |  | 0.3875 |  | 11,802,108 |  |
| 2004 | 31,342,521.40 |  | 40.00 |  | 2.50 |  | 783,563.04 |  | 25.26 |  | 0.3685 |  | 11,549,719 |  |
| 2005 | 40,217,909.28 |  | 40.00 |  | 2.50 |  | 1,005,447.73 |  | 26.03 |  | 0.3493 |  | 14,046,105 |  |
| 2006 | 52,631,459.92 |  | 40.00 |  | 2.50 |  | 1,315,786.50 |  | 26.82 |  | 0.3295 |  | 17,342,066 |  |
| 2007 | 29,320,869.85 |  | 40.00 |  | 2.50 |  | 733,021.75 |  | 27.61 |  | 0.3098 |  | 9,082,139 |  |
| 2008 | 35,784,961.91 |  | 40.00 |  | 2.50 |  | 894,624.05 |  | 28.41 |  | 0.2898 |  | 10,368,693 |  |
| 2009 | 34,710,578.76 |  | 40.00 |  | 2.50 |  | 867,764.47 |  | 29.21 |  | 0.2698 |  | 9,363,179 |  |
| 2010 | 36,585,643.50 |  | 40.00 |  | 2.50 |  | 914,641.09 |  | 30.03 |  | 0.2493 |  | 9,118,972 |  |
| 2011 | 42,678,909.00 |  | 40.00 |  | 2.50 |  | 1,066,972.72 |  | 30.86 |  | 0.2285 |  | 9,752,131 |  |
| 2012 | 56,568,975.26 |  | 40.00 |  | 2.50 |  | 1,414,224.38 |  | 31.69 |  | 0.2078 |  | 11,752,205 |  |
| 2013 | 61,114,537.71 |  | 40.00 |  | 2.50 |  | 1,527,863.44 |  | 32.54 |  | 0.1865 |  | 11,397,861 |  |
| 2014 | 75,510,639.43 |  | 40.00 |  | 2.50 |  | 1,887,765.99 |  | 33.39 |  | 0.1653 |  | 12,478,133 |  |
| 2015 | 48,760,279.07 |  | 40.00 |  | 2.50 |  | 1,219,006.98 |  | 34.24 |  | 0.1440 |  | 7,021,480 |  |
| 2016 | 107,680,893.40 |  | 40.00 |  | 2.50 |  | 2,692,022.34 |  | 35.11 |  | 0.1223 |  | 13,163,989 |  |
| 2017 | 113,886,164.60 |  | 40.00 |  | 2.50 |  | 2,847,154.12 |  | 35.98 |  | 0.1005 |  | 11,445,560 |  |
| 2018 | 107,494,098.91 |  | 40.00 |  | 2.50 |  | 2,687,352.47 |  | 36.87 |  | 0.0783 |  | 8,411,413 |  |
| 2019 | 109,411,249.99 |  | 40.00 |  | 2.50 |  | 2,735,281.25 |  | 37.75 |  | 0.0563 |  | 6,154,383 |  |
| 2020 | 154,120,758.45 |  | 40.00 |  | 2.50 |  | 3,853,018.96 |  | 38.65 |  | 0.0338 |  | 5,201,576 |  |
| 2021 | 184,602,793.26 |  | 40.00 |  | 2.50 |  | 4,615,069.83 |  | 39.55 |  | 0.0113 |  | 2,076,781 |  |
|  | | | | | | | | | | | | | | |
|  | 1,791,157,642.64 |  |  | | | | 44,775,360.71 |  |  | | | | 444,837,367 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.50 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 50-R1.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1938 | 56.34 |  | 50.00 |  | 2.00 |  | 1.13 |  | 4.89 |  | 0.9022 |  | 51 |  |
| 1945 | 581.88 |  | 50.00 |  | 2.00 |  | 11.64 |  | 6.68 |  | 0.8664 |  | 504 |  |
| 1946 | 99.68 |  | 50.00 |  | 2.00 |  | 1.99 |  | 6.96 |  | 0.8608 |  | 86 |  |
| 1947 | 436.98 |  | 50.00 |  | 2.00 |  | 8.74 |  | 7.24 |  | 0.8552 |  | 374 |  |
| 1948 | 134.35 |  | 50.00 |  | 2.00 |  | 2.69 |  | 7.52 |  | 0.8496 |  | 114 |  |
| 1949 | 681.18 |  | 50.00 |  | 2.00 |  | 13.62 |  | 7.81 |  | 0.8438 |  | 575 |  |
| 1950 | 535.23 |  | 50.00 |  | 2.00 |  | 10.70 |  | 8.11 |  | 0.8378 |  | 448 |  |
| 1951 | 294.71 |  | 50.00 |  | 2.00 |  | 5.89 |  | 8.41 |  | 0.8318 |  | 245 |  |
| 1952 | 1,108.18 |  | 50.00 |  | 2.00 |  | 22.16 |  | 8.71 |  | 0.8258 |  | 915 |  |
| 1953 | 684.67 |  | 50.00 |  | 2.00 |  | 13.69 |  | 9.02 |  | 0.8196 |  | 561 |  |
| 1954 | 338.04 |  | 50.00 |  | 2.00 |  | 6.76 |  | 9.33 |  | 0.8134 |  | 275 |  |
| 1955 | 946.58 |  | 50.00 |  | 2.00 |  | 18.93 |  | 9.65 |  | 0.8070 |  | 764 |  |
| 1956 | 381.38 |  | 50.00 |  | 2.00 |  | 7.63 |  | 9.97 |  | 0.8006 |  | 305 |  |
| 1957 | 2,244.81 |  | 50.00 |  | 2.00 |  | 44.90 |  | 10.30 |  | 0.7940 |  | 1,782 |  |
| 1958 | 593.33 |  | 50.00 |  | 2.00 |  | 11.87 |  | 10.64 |  | 0.7872 |  | 467 |  |
| 1959 | 1,218.91 |  | 50.00 |  | 2.00 |  | 24.38 |  | 10.99 |  | 0.7802 |  | 951 |  |
| 1960 | 900.87 |  | 50.00 |  | 2.00 |  | 18.02 |  | 11.34 |  | 0.7732 |  | 697 |  |
| 1961 | 4,401.88 |  | 50.00 |  | 2.00 |  | 88.04 |  | 11.70 |  | 0.7660 |  | 3,372 |  |
| 1962 | 1,861.19 |  | 50.00 |  | 2.00 |  | 37.22 |  | 12.07 |  | 0.7586 |  | 1,412 |  |
| 1963 | 1,642.12 |  | 50.00 |  | 2.00 |  | 32.84 |  | 12.45 |  | 0.7510 |  | 1,233 |  |
| 1964 | 932.68 |  | 50.00 |  | 2.00 |  | 18.65 |  | 12.84 |  | 0.7432 |  | 693 |  |
| 1965 | 2,644.18 |  | 50.00 |  | 2.00 |  | 52.88 |  | 13.24 |  | 0.7352 |  | 1,944 |  |
| 1966 | 1,794.17 |  | 50.00 |  | 2.00 |  | 35.88 |  | 13.65 |  | 0.7270 |  | 1,304 |  |
| 1967 | 793.10 |  | 50.00 |  | 2.00 |  | 15.86 |  | 14.07 |  | 0.7186 |  | 570 |  |
| 1968 | 1,985.22 |  | 50.00 |  | 2.00 |  | 39.70 |  | 14.49 |  | 0.7102 |  | 1,410 |  |
| 1969 | 4,088.25 |  | 50.00 |  | 2.00 |  | 81.76 |  | 14.93 |  | 0.7014 |  | 2,867 |  |
| 1970 | 254,201.13 |  | 50.00 |  | 2.00 |  | 5,084.02 |  | 15.38 |  | 0.6924 |  | 176,009 |  |
| 1971 | 471,920.08 |  | 50.00 |  | 2.00 |  | 9,438.40 |  | 15.84 |  | 0.6832 |  | 322,416 |  |
| 1972 | 802,882.03 |  | 50.00 |  | 2.00 |  | 16,057.64 |  | 16.31 |  | 0.6738 |  | 540,982 |  |
| 1973 | 1,041,620.45 |  | 50.00 |  | 2.00 |  | 20,832.41 |  | 16.79 |  | 0.6642 |  | 691,844 |  |
| 1974 | 805,523.63 |  | 50.00 |  | 2.00 |  | 16,110.47 |  | 17.28 |  | 0.6544 |  | 527,135 |  |
| 1975 | 895,091.67 |  | 50.00 |  | 2.00 |  | 17,901.83 |  | 17.78 |  | 0.6444 |  | 576,797 |  |
| 1976 | 864,253.72 |  | 50.00 |  | 2.00 |  | 17,285.07 |  | 18.29 |  | 0.6342 |  | 548,110 |  |
| 1977 | 1,063,050.67 |  | 50.00 |  | 2.00 |  | 21,261.01 |  | 18.81 |  | 0.6238 |  | 663,131 |  |
| 1978 | 945,219.99 |  | 50.00 |  | 2.00 |  | 18,904.40 |  | 19.35 |  | 0.6130 |  | 579,420 |  |
| 1979 | 1,452,402.77 |  | 50.00 |  | 2.00 |  | 29,048.06 |  | 19.89 |  | 0.6022 |  | 874,637 |  |
| 1980 | 1,174,650.88 |  | 50.00 |  | 2.00 |  | 23,493.02 |  | 20.44 |  | 0.5912 |  | 694,454 |  |
| 1981 | 608,006.38 |  | 50.00 |  | 2.00 |  | 12,160.13 |  | 21.00 |  | 0.5800 |  | 352,644 |  |
| 1982 | 566,338.80 |  | 50.00 |  | 2.00 |  | 11,326.78 |  | 21.58 |  | 0.5684 |  | 321,907 |  |
| 1983 | 862,626.29 |  | 50.00 |  | 2.00 |  | 17,252.53 |  | 22.16 |  | 0.5568 |  | 480,310 |  |
| 1984 | 1,365,866.68 |  | 50.00 |  | 2.00 |  | 27,317.33 |  | 22.75 |  | 0.5450 |  | 744,397 |  |
| 1985 | 1,157,744.96 |  | 50.00 |  | 2.00 |  | 23,154.90 |  | 23.35 |  | 0.5330 |  | 617,078 |  |
| 1986 | 1,010,832.60 |  | 50.00 |  | 2.00 |  | 20,216.65 |  | 23.96 |  | 0.5208 |  | 526,442 |  |
| 1987 | 1,125,504.53 |  | 50.00 |  | 2.00 |  | 22,510.09 |  | 24.58 |  | 0.5084 |  | 572,207 |  |
| 1988 | 1,450,510.83 |  | 50.00 |  | 2.00 |  | 29,010.22 |  | 25.21 |  | 0.4958 |  | 719,163 |  |
| 1989 | 1,522,855.53 |  | 50.00 |  | 2.00 |  | 30,457.11 |  | 25.84 |  | 0.4832 |  | 735,844 |  |
| 1990 | 2,007,999.30 |  | 50.00 |  | 2.00 |  | 40,159.99 |  | 26.49 |  | 0.4702 |  | 944,161 |  |
| 1991 | 1,860,982.88 |  | 50.00 |  | 2.00 |  | 37,219.66 |  | 27.14 |  | 0.4572 |  | 850,841 |  |
| 1992 | 2,081,214.34 |  | 50.00 |  | 2.00 |  | 41,624.29 |  | 27.80 |  | 0.4440 |  | 924,059 |  |
| 1993 | 2,268,035.95 |  | 50.00 |  | 2.00 |  | 45,360.72 |  | 28.47 |  | 0.4306 |  | 976,616 |  |
| 1994 | 3,128,594.23 |  | 50.00 |  | 2.00 |  | 62,571.88 |  | 29.14 |  | 0.4172 |  | 1,305,250 |  |
| 1995 | 2,139,828.42 |  | 50.00 |  | 2.00 |  | 42,796.57 |  | 29.83 |  | 0.4034 |  | 863,207 |  |
| 1996 | 2,733,495.42 |  | 50.00 |  | 2.00 |  | 54,669.91 |  | 30.52 |  | 0.3896 |  | 1,064,970 |  |
| 1997 | 2,992,830.41 |  | 50.00 |  | 2.00 |  | 59,856.61 |  | 31.22 |  | 0.3756 |  | 1,124,107 |  |
| 1998 | 3,774,825.99 |  | 50.00 |  | 2.00 |  | 75,496.52 |  | 31.92 |  | 0.3616 |  | 1,364,977 |  |
| 1999 | 3,936,751.98 |  | 50.00 |  | 2.00 |  | 78,735.04 |  | 32.63 |  | 0.3474 |  | 1,367,628 |  |
| 2000 | 4,198,484.99 |  | 50.00 |  | 2.00 |  | 83,969.70 |  | 33.35 |  | 0.3330 |  | 1,398,096 |  |
| 2001 | 4,281,866.00 |  | 50.00 |  | 2.00 |  | 85,637.32 |  | 34.07 |  | 0.3186 |  | 1,364,203 |  |
| 2002 | 6,780,963.93 |  | 50.00 |  | 2.00 |  | 135,619.28 |  | 34.80 |  | 0.3040 |  | 2,061,413 |  |
| 2003 | 5,759,530.15 |  | 50.00 |  | 2.00 |  | 115,190.60 |  | 35.53 |  | 0.2894 |  | 1,666,808 |  |
| 2004 | 4,546,268.93 |  | 50.00 |  | 2.00 |  | 90,925.38 |  | 36.27 |  | 0.2746 |  | 1,248,405 |  |
| 2005 | 4,774,310.80 |  | 50.00 |  | 2.00 |  | 95,486.22 |  | 37.02 |  | 0.2596 |  | 1,239,411 |  |
| 2006 | 14,910,520.24 |  | 50.00 |  | 2.00 |  | 298,210.40 |  | 37.77 |  | 0.2446 |  | 3,647,113 |  |
| 2007 | 17,832,685.04 |  | 50.00 |  | 2.00 |  | 356,653.70 |  | 38.52 |  | 0.2296 |  | 4,094,384 |  |
| 2008 | 29,419,179.55 |  | 50.00 |  | 2.00 |  | 588,383.59 |  | 39.28 |  | 0.2144 |  | 6,307,472 |  |
| 2009 | 32,847,198.21 |  | 50.00 |  | 2.00 |  | 656,943.96 |  | 40.05 |  | 0.1990 |  | 6,536,592 |  |
| 2010 | 25,382,562.46 |  | 50.00 |  | 2.00 |  | 507,651.25 |  | 40.82 |  | 0.1836 |  | 4,660,238 |  |
| 2011 | 23,415,290.94 |  | 50.00 |  | 2.00 |  | 468,305.82 |  | 41.59 |  | 0.1682 |  | 3,938,452 |  |
| 2012 | 22,373,854.71 |  | 50.00 |  | 2.00 |  | 447,477.09 |  | 42.37 |  | 0.1526 |  | 3,414,250 |  |
| 2013 | 41,677,048.42 |  | 50.00 |  | 2.00 |  | 833,540.97 |  | 43.15 |  | 0.1370 |  | 5,709,756 |  |
| 2014 | 90,110,716.75 |  | 50.00 |  | 2.00 |  | 1,802,214.34 |  | 43.94 |  | 0.1212 |  | 10,921,419 |  |
| 2015 | 132,993,931.25 |  | 50.00 |  | 2.00 |  | 2,659,878.62 |  | 44.73 |  | 0.1054 |  | 14,017,560 |  |
| 2016 | 199,092,941.85 |  | 50.00 |  | 2.00 |  | 3,981,858.84 |  | 45.53 |  | 0.0894 |  | 17,798,909 |  |
| 2017 | 189,647,557.44 |  | 50.00 |  | 2.00 |  | 3,792,951.15 |  | 46.33 |  | 0.0734 |  | 13,920,131 |  |
| 2018 | 202,525,536.70 |  | 50.00 |  | 2.00 |  | 4,050,510.73 |  | 47.14 |  | 0.0572 |  | 11,584,461 |  |
| 2019 | 165,906,899.36 |  | 50.00 |  | 2.00 |  | 3,318,137.99 |  | 47.95 |  | 0.0410 |  | 6,802,183 |  |
| 2020 | 189,927,513.25 |  | 50.00 |  | 2.00 |  | 3,798,550.26 |  | 48.77 |  | 0.0246 |  | 4,672,217 |  |
| 2021 | 211,933,364.68 |  | 50.00 |  | 2.00 |  | 4,238,667.29 |  | 49.59 |  | 0.0082 |  | 1,737,854 |  |
|  | | | | | | | | | | | | | | |
|  | 1,666,735,268.10 |  |  | | | | 33,334,705.33 |  |  | | | | 150,815,989 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.00 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 55-R0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1921 | 43.82 |  | 55.00 |  | 1.82 |  | 0.80 |  | 4.52 |  | 0.9178 |  | 40 |  |
| 1922 | 83.43 |  | 55.00 |  | 1.82 |  | 1.52 |  | 4.96 |  | 0.9098 |  | 76 |  |
| 1923 | 91.36 |  | 55.00 |  | 1.82 |  | 1.66 |  | 5.40 |  | 0.9018 |  | 82 |  |
| 1924 | 80.15 |  | 55.00 |  | 1.82 |  | 1.46 |  | 5.83 |  | 0.8940 |  | 72 |  |
| 1925 | 276.48 |  | 55.00 |  | 1.82 |  | 5.03 |  | 6.26 |  | 0.8862 |  | 245 |  |
| 1926 | 1,489.63 |  | 55.00 |  | 1.82 |  | 27.11 |  | 6.68 |  | 0.8786 |  | 1,309 |  |
| 1927 | 2,611.45 |  | 55.00 |  | 1.82 |  | 47.53 |  | 7.10 |  | 0.8709 |  | 2,274 |  |
| 1928 | 2,636.93 |  | 55.00 |  | 1.82 |  | 47.99 |  | 7.51 |  | 0.8635 |  | 2,277 |  |
| 1929 | 1,265.84 |  | 55.00 |  | 1.82 |  | 23.04 |  | 7.92 |  | 0.8560 |  | 1,084 |  |
| 1930 | 2,283.59 |  | 55.00 |  | 1.82 |  | 41.56 |  | 8.32 |  | 0.8487 |  | 1,938 |  |
| 1931 | 1,243.00 |  | 55.00 |  | 1.82 |  | 22.62 |  | 8.73 |  | 0.8413 |  | 1,046 |  |
| 1932 | 957.40 |  | 55.00 |  | 1.82 |  | 17.42 |  | 9.13 |  | 0.8340 |  | 798 |  |
| 1933 | 545.41 |  | 55.00 |  | 1.82 |  | 9.93 |  | 9.52 |  | 0.8269 |  | 451 |  |
| 1934 | 875.21 |  | 55.00 |  | 1.82 |  | 15.93 |  | 9.92 |  | 0.8196 |  | 717 |  |
| 1935 | 2,072.51 |  | 55.00 |  | 1.82 |  | 37.72 |  | 10.32 |  | 0.8124 |  | 1,684 |  |
| 1936 | 4,763.46 |  | 55.00 |  | 1.82 |  | 86.69 |  | 10.71 |  | 0.8053 |  | 3,836 |  |
| 1937 | 7,134.22 |  | 55.00 |  | 1.82 |  | 129.84 |  | 11.11 |  | 0.7980 |  | 5,693 |  |
| 1938 | 11,743.90 |  | 55.00 |  | 1.82 |  | 213.74 |  | 11.51 |  | 0.7907 |  | 9,286 |  |
| 1939 | 6,263.62 |  | 55.00 |  | 1.82 |  | 114.00 |  | 11.90 |  | 0.7836 |  | 4,908 |  |
| 1940 | 6,949.68 |  | 55.00 |  | 1.82 |  | 126.48 |  | 12.30 |  | 0.7764 |  | 5,395 |  |
| 1941 | 7,188.17 |  | 55.00 |  | 1.82 |  | 130.82 |  | 12.70 |  | 0.7691 |  | 5,528 |  |
| 1942 | 33,204.79 |  | 55.00 |  | 1.82 |  | 604.33 |  | 13.10 |  | 0.7618 |  | 25,296 |  |
| 1943 | 14,991.71 |  | 55.00 |  | 1.82 |  | 272.85 |  | 13.50 |  | 0.7546 |  | 11,312 |  |
| 1944 | 18,787.93 |  | 55.00 |  | 1.82 |  | 341.94 |  | 13.90 |  | 0.7473 |  | 14,040 |  |
| 1945 | 52,597.27 |  | 55.00 |  | 1.82 |  | 957.27 |  | 14.31 |  | 0.7398 |  | 38,913 |  |
| 1946 | 147,231.65 |  | 55.00 |  | 1.82 |  | 2,679.62 |  | 14.71 |  | 0.7326 |  | 107,855 |  |
| 1947 | 248,774.12 |  | 55.00 |  | 1.82 |  | 4,527.69 |  | 15.12 |  | 0.7251 |  | 180,384 |  |
| 1948 | 345,514.32 |  | 55.00 |  | 1.82 |  | 6,288.36 |  | 15.53 |  | 0.7176 |  | 247,955 |  |
| 1949 | 513,086.93 |  | 55.00 |  | 1.82 |  | 9,338.18 |  | 15.95 |  | 0.7100 |  | 364,292 |  |
| 1950 | 487,656.31 |  | 55.00 |  | 1.82 |  | 8,875.34 |  | 16.37 |  | 0.7024 |  | 342,510 |  |
| 1951 | 304,619.31 |  | 55.00 |  | 1.82 |  | 5,544.07 |  | 16.79 |  | 0.6947 |  | 211,628 |  |
| 1952 | 353,066.30 |  | 55.00 |  | 1.82 |  | 6,425.81 |  | 17.21 |  | 0.6871 |  | 242,588 |  |
| 1953 | 320,524.41 |  | 55.00 |  | 1.82 |  | 5,833.54 |  | 17.63 |  | 0.6795 |  | 217,780 |  |
| 1954 | 338,259.98 |  | 55.00 |  | 1.82 |  | 6,156.33 |  | 18.06 |  | 0.6716 |  | 227,189 |  |
| 1955 | 342,511.57 |  | 55.00 |  | 1.82 |  | 6,233.71 |  | 18.50 |  | 0.6636 |  | 227,304 |  |
| 1956 | 343,216.67 |  | 55.00 |  | 1.82 |  | 6,246.54 |  | 18.93 |  | 0.6558 |  | 225,088 |  |
| 1957 | 427,149.56 |  | 55.00 |  | 1.82 |  | 7,774.12 |  | 19.37 |  | 0.6478 |  | 276,716 |  |
| 1958 | 442,197.56 |  | 55.00 |  | 1.82 |  | 8,048.00 |  | 19.82 |  | 0.6396 |  | 282,847 |  |
| 1959 | 506,600.99 |  | 55.00 |  | 1.82 |  | 9,220.14 |  | 20.26 |  | 0.6316 |  | 319,989 |  |
| 1960 | 565,011.77 |  | 55.00 |  | 1.82 |  | 10,283.21 |  | 20.72 |  | 0.6233 |  | 352,155 |  |
| 1961 | 1,015,808.98 |  | 55.00 |  | 1.82 |  | 18,487.72 |  | 21.17 |  | 0.6151 |  | 624,814 |  |
| 1962 | 1,019,378.29 |  | 55.00 |  | 1.82 |  | 18,552.68 |  | 21.63 |  | 0.6067 |  | 618,487 |  |
| 1963 | 1,223,210.00 |  | 55.00 |  | 1.82 |  | 22,262.42 |  | 22.09 |  | 0.5984 |  | 731,920 |  |
| 1964 | 1,516,582.40 |  | 55.00 |  | 1.82 |  | 27,601.80 |  | 22.56 |  | 0.5898 |  | 894,511 |  |
| 1965 | 1,506,375.88 |  | 55.00 |  | 1.82 |  | 27,416.04 |  | 23.03 |  | 0.5813 |  | 875,611 |  |
| 1966 | 1,697,516.41 |  | 55.00 |  | 1.82 |  | 30,894.80 |  | 23.51 |  | 0.5726 |  | 971,913 |  |
| 1967 | 2,138,140.81 |  | 55.00 |  | 1.82 |  | 38,914.16 |  | 23.99 |  | 0.5638 |  | 1,205,527 |  |
| 1968 | 2,370,072.26 |  | 55.00 |  | 1.82 |  | 43,135.32 |  | 24.47 |  | 0.5551 |  | 1,315,603 |  |
| 1969 | 3,816,456.47 |  | 55.00 |  | 1.82 |  | 69,459.51 |  | 24.96 |  | 0.5462 |  | 2,084,472 |  |
| 1970 | 8,616,116.15 |  | 55.00 |  | 1.82 |  | 156,813.31 |  | 25.45 |  | 0.5373 |  | 4,629,181 |  |
| 1971 | 6,427,380.44 |  | 55.00 |  | 1.82 |  | 116,978.32 |  | 25.95 |  | 0.5282 |  | 3,394,814 |  |
| 1972 | 8,894,955.08 |  | 55.00 |  | 1.82 |  | 161,888.18 |  | 26.45 |  | 0.5191 |  | 4,617,282 |  |
| 1973 | 9,041,740.82 |  | 55.00 |  | 1.82 |  | 164,559.68 |  | 26.95 |  | 0.5100 |  | 4,611,288 |  |
| 1974 | 8,776,808.08 |  | 55.00 |  | 1.82 |  | 159,737.91 |  | 27.46 |  | 0.5007 |  | 4,394,811 |  |
| 1975 | 8,948,954.55 |  | 55.00 |  | 1.82 |  | 162,870.97 |  | 27.98 |  | 0.4913 |  | 4,396,353 |  |
| 1976 | 7,153,221.53 |  | 55.00 |  | 1.82 |  | 130,188.63 |  | 28.49 |  | 0.4820 |  | 3,447,853 |  |
| 1977 | 7,892,311.58 |  | 55.00 |  | 1.82 |  | 143,640.07 |  | 29.01 |  | 0.4726 |  | 3,729,512 |  |
| 1978 | 9,917,395.80 |  | 55.00 |  | 1.82 |  | 180,496.60 |  | 29.54 |  | 0.4629 |  | 4,590,862 |  |
| 1979 | 16,811,312.15 |  | 55.00 |  | 1.82 |  | 305,965.88 |  | 30.07 |  | 0.4533 |  | 7,620,063 |  |
| 1980 | 18,281,592.97 |  | 55.00 |  | 1.82 |  | 332,724.99 |  | 30.60 |  | 0.4436 |  | 8,110,446 |  |
| 1981 | 17,547,259.76 |  | 55.00 |  | 1.82 |  | 319,360.13 |  | 31.14 |  | 0.4338 |  | 7,612,352 |  |
| 1982 | 15,342,198.91 |  | 55.00 |  | 1.82 |  | 279,228.02 |  | 31.68 |  | 0.4240 |  | 6,505,092 |  |
| 1983 | 17,951,158.75 |  | 55.00 |  | 1.82 |  | 326,711.09 |  | 32.23 |  | 0.4140 |  | 7,431,780 |  |
| 1984 | 23,045,271.40 |  | 55.00 |  | 1.82 |  | 419,423.94 |  | 32.78 |  | 0.4040 |  | 9,310,290 |  |
| 1985 | 22,796,079.93 |  | 55.00 |  | 1.82 |  | 414,888.65 |  | 33.33 |  | 0.3940 |  | 8,981,655 |  |
| 1986 | 22,458,471.23 |  | 55.00 |  | 1.82 |  | 408,744.18 |  | 33.88 |  | 0.3840 |  | 8,624,053 |  |
| 1987 | 26,060,339.11 |  | 55.00 |  | 1.82 |  | 474,298.17 |  | 34.44 |  | 0.3738 |  | 9,741,876 |  |
| 1988 | 34,010,050.53 |  | 55.00 |  | 1.82 |  | 618,982.92 |  | 35.01 |  | 0.3635 |  | 12,360,953 |  |
| 1989 | 40,561,898.21 |  | 55.00 |  | 1.82 |  | 738,226.55 |  | 35.57 |  | 0.3533 |  | 14,329,302 |  |
| 1990 | 44,109,908.47 |  | 55.00 |  | 1.82 |  | 802,800.33 |  | 36.14 |  | 0.3429 |  | 15,125,729 |  |
| 1991 | 37,122,814.22 |  | 55.00 |  | 1.82 |  | 675,635.22 |  | 36.71 |  | 0.3326 |  | 12,345,192 |  |
| 1992 | 33,038,022.12 |  | 55.00 |  | 1.82 |  | 601,292.00 |  | 37.29 |  | 0.3220 |  | 10,638,243 |  |
| 1993 | 40,603,298.40 |  | 55.00 |  | 1.82 |  | 738,980.03 |  | 37.86 |  | 0.3116 |  | 12,653,612 |  |
| 1994 | 29,937,523.96 |  | 55.00 |  | 1.82 |  | 544,862.94 |  | 38.44 |  | 0.3011 |  | 9,013,889 |  |
| 1995 | 27,137,788.70 |  | 55.00 |  | 1.82 |  | 493,907.75 |  | 39.03 |  | 0.2904 |  | 7,879,728 |  |
| 1996 | 23,592,180.30 |  | 55.00 |  | 1.82 |  | 429,377.68 |  | 39.61 |  | 0.2798 |  | 6,601,564 |  |
| 1997 | 25,033,689.72 |  | 55.00 |  | 1.82 |  | 455,613.15 |  | 40.20 |  | 0.2691 |  | 6,736,316 |  |
| 1998 | 30,076,124.80 |  | 55.00 |  | 1.82 |  | 547,385.47 |  | 40.78 |  | 0.2586 |  | 7,776,182 |  |
| 1999 | 29,155,196.35 |  | 55.00 |  | 1.82 |  | 530,624.57 |  | 41.37 |  | 0.2478 |  | 7,225,241 |  |
| 2000 | 35,180,738.21 |  | 55.00 |  | 1.82 |  | 640,289.44 |  | 41.96 |  | 0.2371 |  | 8,341,001 |  |
| 2001 | 29,389,149.36 |  | 55.00 |  | 1.82 |  | 534,882.52 |  | 42.56 |  | 0.2262 |  | 6,647,238 |  |
| 2002 | 36,259,601.70 |  | 55.00 |  | 1.82 |  | 659,924.75 |  | 43.15 |  | 0.2155 |  | 7,812,131 |  |
| 2003 | 49,173,948.74 |  | 55.00 |  | 1.82 |  | 894,965.87 |  | 43.75 |  | 0.2046 |  | 10,058,531 |  |
| 2004 | 45,712,301.24 |  | 55.00 |  | 1.82 |  | 831,963.88 |  | 44.34 |  | 0.1938 |  | 8,859,958 |  |
| 2005 | 54,137,402.01 |  | 55.00 |  | 1.82 |  | 985,300.72 |  | 44.94 |  | 0.1829 |  | 9,902,272 |  |
| 2006 | 65,860,314.08 |  | 55.00 |  | 1.82 |  | 1,198,657.72 |  | 45.54 |  | 0.1720 |  | 11,327,974 |  |
| 2007 | 48,686,361.14 |  | 55.00 |  | 1.82 |  | 886,091.77 |  | 46.14 |  | 0.1611 |  | 7,842,886 |  |
| 2008 | 43,822,829.30 |  | 55.00 |  | 1.82 |  | 797,575.49 |  | 46.74 |  | 0.1502 |  | 6,581,313 |  |
| 2009 | 43,285,363.70 |  | 55.00 |  | 1.82 |  | 787,793.62 |  | 47.35 |  | 0.1391 |  | 6,020,561 |  |
| 2010 | 42,137,975.69 |  | 55.00 |  | 1.82 |  | 766,911.16 |  | 47.95 |  | 0.1282 |  | 5,401,246 |  |
| 2011 | 53,206,624.96 |  | 55.00 |  | 1.82 |  | 968,360.57 |  | 48.56 |  | 0.1171 |  | 6,229,964 |  |
| 2012 | 54,376,639.80 |  | 55.00 |  | 1.82 |  | 989,654.84 |  | 49.16 |  | 0.1062 |  | 5,773,712 |  |
| 2013 | 81,979,129.34 |  | 55.00 |  | 1.82 |  | 1,492,020.15 |  | 49.77 |  | 0.0951 |  | 7,795,395 |  |
| 2014 | 132,993,240.59 |  | 55.00 |  | 1.82 |  | 2,420,476.98 |  | 50.38 |  | 0.0840 |  | 11,171,432 |  |
| 2015 | 277,161,408.80 |  | 55.00 |  | 1.82 |  | 5,044,337.64 |  | 50.99 |  | 0.0729 |  | 20,207,838 |  |
| 2016 | 319,755,994.03 |  | 55.00 |  | 1.82 |  | 5,819,559.09 |  | 51.60 |  | 0.0618 |  | 19,767,316 |  |
| 2017 | 349,011,242.59 |  | 55.00 |  | 1.82 |  | 6,352,004.62 |  | 52.22 |  | 0.0506 |  | 17,642,518 |  |
| 2018 | 419,201,368.77 |  | 55.00 |  | 1.82 |  | 7,629,464.91 |  | 52.83 |  | 0.0395 |  | 16,537,494 |  |
| 2019 | 328,703,918.40 |  | 55.00 |  | 1.82 |  | 5,982,411.31 |  | 53.45 |  | 0.0282 |  | 9,262,876 |  |
| 2020 | 482,350,958.59 |  | 55.00 |  | 1.82 |  | 8,778,787.45 |  | 54.07 |  | 0.0169 |  | 8,156,555 |  |
| 2021 | 437,254,116.65 |  | 55.00 |  | 1.82 |  | 7,958,024.92 |  | 54.69 |  | 0.0056 |  | 2,466,113 |  |
|  | | | | | | | | | | | | | | |
|  | 4,102,150,835.62 |  |  | | | | 74,659,145.14 |  |  | | | | 461,529,276 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.82 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 70-R3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 174,065.96 |  | 70.00 |  | 1.43 |  | 2,489.14 |  | 9.91 |  | 0.8584 |  | 149,423 |  |
| 1942 | 14,274.62 |  | 70.00 |  | 1.43 |  | 204.13 |  | 10.25 |  | 0.8536 |  | 12,184 |  |
| 1946 | 6,594.23 |  | 70.00 |  | 1.43 |  | 94.30 |  | 11.74 |  | 0.8323 |  | 5,488 |  |
| 1947 | 13,630.14 |  | 70.00 |  | 1.43 |  | 194.91 |  | 12.15 |  | 0.8264 |  | 11,264 |  |
| 1948 | 1,021,656.29 |  | 70.00 |  | 1.43 |  | 14,609.68 |  | 12.56 |  | 0.8206 |  | 838,341 |  |
| 1949 | 874,930.41 |  | 70.00 |  | 1.43 |  | 12,511.50 |  | 12.99 |  | 0.8144 |  | 712,570 |  |
| 1950 | 89,948.84 |  | 70.00 |  | 1.43 |  | 1,286.27 |  | 13.43 |  | 0.8081 |  | 72,691 |  |
| 1951 | 307,179.87 |  | 70.00 |  | 1.43 |  | 4,392.67 |  | 13.89 |  | 0.8016 |  | 246,226 |  |
| 1952 | 218,928.47 |  | 70.00 |  | 1.43 |  | 3,130.68 |  | 14.36 |  | 0.7949 |  | 174,017 |  |
| 1953 | 416,535.99 |  | 70.00 |  | 1.43 |  | 5,956.46 |  | 14.84 |  | 0.7880 |  | 328,230 |  |
| 1954 | 199,148.53 |  | 70.00 |  | 1.43 |  | 2,847.82 |  | 15.34 |  | 0.7809 |  | 155,507 |  |
| 1955 | 398,744.96 |  | 70.00 |  | 1.43 |  | 5,702.05 |  | 15.85 |  | 0.7736 |  | 308,457 |  |
| 1956 | 339,801.23 |  | 70.00 |  | 1.43 |  | 4,859.16 |  | 16.37 |  | 0.7661 |  | 260,335 |  |
| 1957 | 421,736.26 |  | 70.00 |  | 1.43 |  | 6,030.83 |  | 16.91 |  | 0.7584 |  | 319,857 |  |
| 1958 | 294,213.06 |  | 70.00 |  | 1.43 |  | 4,207.25 |  | 17.46 |  | 0.7506 |  | 220,827 |  |
| 1959 | 432,251.22 |  | 70.00 |  | 1.43 |  | 6,181.19 |  | 18.03 |  | 0.7424 |  | 320,916 |  |
| 1960 | 360,160.93 |  | 70.00 |  | 1.43 |  | 5,150.30 |  | 18.60 |  | 0.7343 |  | 264,463 |  |
| 1961 | 276,408.84 |  | 70.00 |  | 1.43 |  | 3,952.65 |  | 19.19 |  | 0.7259 |  | 200,634 |  |
| 1962 | 246,732.69 |  | 70.00 |  | 1.43 |  | 3,528.28 |  | 19.79 |  | 0.7173 |  | 176,979 |  |
| 1963 | 364,138.63 |  | 70.00 |  | 1.43 |  | 5,207.18 |  | 20.41 |  | 0.7084 |  | 257,967 |  |
| 1964 | 411,621.22 |  | 70.00 |  | 1.43 |  | 5,886.18 |  | 21.03 |  | 0.6996 |  | 287,958 |  |
| 1965 | 1,381,245.39 |  | 70.00 |  | 1.43 |  | 19,751.81 |  | 21.67 |  | 0.6904 |  | 953,653 |  |
| 1966 | 1,398,456.29 |  | 70.00 |  | 1.43 |  | 19,997.92 |  | 22.32 |  | 0.6811 |  | 952,545 |  |
| 1967 | 2,310,088.32 |  | 70.00 |  | 1.43 |  | 33,034.26 |  | 22.98 |  | 0.6717 |  | 1,551,709 |  |
| 1968 | 1,693,773.28 |  | 70.00 |  | 1.43 |  | 24,220.96 |  | 23.65 |  | 0.6621 |  | 1,121,515 |  |
| 1969 | 3,441,714.39 |  | 70.00 |  | 1.43 |  | 49,216.52 |  | 24.33 |  | 0.6524 |  | 2,245,478 |  |
| 1970 | 9,029,633.94 |  | 70.00 |  | 1.43 |  | 129,123.77 |  | 25.02 |  | 0.6426 |  | 5,802,172 |  |
| 1971 | 5,569,393.00 |  | 70.00 |  | 1.43 |  | 79,642.32 |  | 25.72 |  | 0.6326 |  | 3,523,031 |  |
| 1972 | 6,416,513.58 |  | 70.00 |  | 1.43 |  | 91,756.14 |  | 26.43 |  | 0.6224 |  | 3,993,831 |  |
| 1973 | 7,736,520.90 |  | 70.00 |  | 1.43 |  | 110,632.25 |  | 27.14 |  | 0.6123 |  | 4,736,994 |  |
| 1974 | 7,271,405.12 |  | 70.00 |  | 1.43 |  | 103,981.09 |  | 27.87 |  | 0.6019 |  | 4,376,368 |  |
| 1975 | 9,631,047.61 |  | 70.00 |  | 1.43 |  | 137,723.98 |  | 28.61 |  | 0.5913 |  | 5,694,742 |  |
| 1976 | 5,152,967.91 |  | 70.00 |  | 1.43 |  | 73,687.44 |  | 29.35 |  | 0.5807 |  | 2,992,380 |  |
| 1977 | 4,927,794.55 |  | 70.00 |  | 1.43 |  | 70,467.46 |  | 30.11 |  | 0.5699 |  | 2,808,153 |  |
| 1978 | 2,850,767.66 |  | 70.00 |  | 1.43 |  | 40,765.98 |  | 30.87 |  | 0.5590 |  | 1,593,579 |  |
| 1979 | 6,835,838.85 |  | 70.00 |  | 1.43 |  | 97,752.50 |  | 31.64 |  | 0.5480 |  | 3,746,040 |  |
| 1980 | 9,645,095.87 |  | 70.00 |  | 1.43 |  | 137,924.87 |  | 32.42 |  | 0.5369 |  | 5,178,066 |  |
| 1981 | 10,198,255.75 |  | 70.00 |  | 1.43 |  | 145,835.06 |  | 33.20 |  | 0.5257 |  | 5,361,325 |  |
| 1982 | 8,999,689.17 |  | 70.00 |  | 1.43 |  | 128,695.56 |  | 33.99 |  | 0.5144 |  | 4,629,710 |  |
| 1983 | 10,648,312.79 |  | 70.00 |  | 1.43 |  | 152,270.87 |  | 34.79 |  | 0.5030 |  | 5,356,101 |  |
| 1984 | 13,619,488.33 |  | 70.00 |  | 1.43 |  | 194,758.68 |  | 35.60 |  | 0.4914 |  | 6,693,025 |  |
| 1985 | 15,576,281.87 |  | 70.00 |  | 1.43 |  | 222,740.83 |  | 36.42 |  | 0.4797 |  | 7,472,098 |  |
| 1986 | 17,058,334.09 |  | 70.00 |  | 1.43 |  | 243,934.18 |  | 37.24 |  | 0.4680 |  | 7,983,300 |  |
| 1987 | 19,953,229.78 |  | 70.00 |  | 1.43 |  | 285,331.19 |  | 38.07 |  | 0.4561 |  | 9,101,466 |  |
| 1988 | 21,854,511.61 |  | 70.00 |  | 1.43 |  | 312,519.52 |  | 38.91 |  | 0.4441 |  | 9,706,463 |  |
| 1989 | 29,068,678.60 |  | 70.00 |  | 1.43 |  | 415,682.10 |  | 39.75 |  | 0.4321 |  | 12,561,739 |  |
| 1990 | 28,045,017.93 |  | 70.00 |  | 1.43 |  | 401,043.76 |  | 40.60 |  | 0.4200 |  | 11,778,908 |  |
| 1991 | 22,868,414.03 |  | 70.00 |  | 1.43 |  | 327,018.32 |  | 41.46 |  | 0.4077 |  | 9,323,681 |  |
| 1992 | 17,818,889.96 |  | 70.00 |  | 1.43 |  | 254,810.13 |  | 42.32 |  | 0.3954 |  | 7,046,124 |  |
| 1993 | 22,523,245.75 |  | 70.00 |  | 1.43 |  | 322,082.41 |  | 43.19 |  | 0.3830 |  | 8,626,403 |  |
| 1994 | 20,187,800.22 |  | 70.00 |  | 1.43 |  | 288,685.54 |  | 44.07 |  | 0.3704 |  | 7,478,167 |  |
| 1995 | 24,089,262.21 |  | 70.00 |  | 1.43 |  | 344,476.45 |  | 44.95 |  | 0.3579 |  | 8,620,583 |  |
| 1996 | 22,813,474.40 |  | 70.00 |  | 1.43 |  | 326,232.68 |  | 45.84 |  | 0.3451 |  | 7,873,843 |  |
| 1997 | 35,989,728.60 |  | 70.00 |  | 1.43 |  | 514,653.12 |  | 46.73 |  | 0.3324 |  | 11,964,065 |  |
| 1998 | 51,629,387.85 |  | 70.00 |  | 1.43 |  | 738,300.25 |  | 47.63 |  | 0.3196 |  | 16,499,203 |  |
| 1999 | 49,195,191.79 |  | 70.00 |  | 1.43 |  | 703,491.24 |  | 48.54 |  | 0.3066 |  | 15,081,770 |  |
| 2000 | 67,828,577.48 |  | 70.00 |  | 1.43 |  | 969,948.66 |  | 49.45 |  | 0.2936 |  | 19,912,435 |  |
| 2001 | 64,170,111.13 |  | 70.00 |  | 1.43 |  | 917,632.59 |  | 50.36 |  | 0.2806 |  | 18,004,208 |  |
| 2002 | 83,953,754.72 |  | 70.00 |  | 1.43 |  | 1,200,538.69 |  | 51.29 |  | 0.2673 |  | 22,439,999 |  |
| 2003 | 79,670,703.83 |  | 70.00 |  | 1.43 |  | 1,139,291.06 |  | 52.21 |  | 0.2541 |  | 20,247,513 |  |
| 2004 | 88,033,150.34 |  | 70.00 |  | 1.43 |  | 1,258,874.05 |  | 53.14 |  | 0.2409 |  | 21,203,665 |  |
| 2005 | 96,815,486.40 |  | 70.00 |  | 1.43 |  | 1,384,461.46 |  | 54.08 |  | 0.2274 |  | 22,018,746 |  |
| 2006 | 98,902,705.82 |  | 70.00 |  | 1.43 |  | 1,414,308.69 |  | 55.02 |  | 0.2140 |  | 21,165,179 |  |
| 2007 | 68,636,572.54 |  | 70.00 |  | 1.43 |  | 981,502.99 |  | 55.96 |  | 0.2006 |  | 13,766,437 |  |
| 2008 | 61,977,346.23 |  | 70.00 |  | 1.43 |  | 886,276.05 |  | 56.91 |  | 0.1870 |  | 11,589,764 |  |
| 2009 | 39,115,498.40 |  | 70.00 |  | 1.43 |  | 559,351.63 |  | 57.86 |  | 0.1734 |  | 6,783,801 |  |
| 2010 | 28,515,958.63 |  | 70.00 |  | 1.43 |  | 407,778.21 |  | 58.81 |  | 0.1599 |  | 4,558,561 |  |
| 2011 | 36,681,587.02 |  | 70.00 |  | 1.43 |  | 524,546.69 |  | 59.77 |  | 0.1461 |  | 5,360,647 |  |
| 2012 | 41,750,886.56 |  | 70.00 |  | 1.43 |  | 597,037.68 |  | 60.73 |  | 0.1324 |  | 5,529,070 |  |
| 2013 | 48,841,150.71 |  | 70.00 |  | 1.43 |  | 698,428.46 |  | 61.70 |  | 0.1186 |  | 5,791,095 |  |
| 2014 | 53,565,927.46 |  | 70.00 |  | 1.43 |  | 765,992.76 |  | 62.67 |  | 0.1047 |  | 5,608,888 |  |
| 2015 | 68,192,214.27 |  | 70.00 |  | 1.43 |  | 975,148.66 |  | 63.64 |  | 0.0909 |  | 6,195,945 |  |
| 2016 | 80,027,185.58 |  | 70.00 |  | 1.43 |  | 1,144,388.75 |  | 64.61 |  | 0.0770 |  | 6,162,093 |  |
| 2017 | 92,584,068.85 |  | 70.00 |  | 1.43 |  | 1,323,952.18 |  | 65.59 |  | 0.0630 |  | 5,832,796 |  |
| 2018 | 108,531,506.22 |  | 70.00 |  | 1.43 |  | 1,552,000.54 |  | 66.56 |  | 0.0491 |  | 5,333,238 |  |
| 2019 | 113,209,955.75 |  | 70.00 |  | 1.43 |  | 1,618,902.37 |  | 67.54 |  | 0.0351 |  | 3,978,198 |  |
| 2020 | 157,108,824.29 |  | 70.00 |  | 1.43 |  | 2,246,656.19 |  | 68.52 |  | 0.0211 |  | 3,321,281 |  |
| 2021 | 181,980,383.90 |  | 70.00 |  | 1.43 |  | 2,602,319.49 |  | 69.51 |  | 0.0070 |  | 1,273,863 |  |
|  | | | | | | | | | | | | | | |
|  | 2,294,405,709.91 |  |  | | | | 32,810,001.64 |  |  | | | | 465,829,986 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.43 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 55-R4 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1965 | 108.43 |  | 55.00 |  | 1.82 |  | 1.97 |  | 7.38 |  | 0.8658 |  | 94 |  |
| 1966 | 36,662.37 |  | 55.00 |  | 1.82 |  | 667.26 |  | 7.82 |  | 0.8578 |  | 31,450 |  |
| 1967 | 21,564.14 |  | 55.00 |  | 1.82 |  | 392.47 |  | 8.29 |  | 0.8493 |  | 18,314 |  |
| 1968 | 40,561.46 |  | 55.00 |  | 1.82 |  | 738.22 |  | 8.78 |  | 0.8404 |  | 34,086 |  |
| 1969 | 71,269.07 |  | 55.00 |  | 1.82 |  | 1,297.10 |  | 9.31 |  | 0.8307 |  | 59,205 |  |
| 1970 | 15,712.68 |  | 55.00 |  | 1.82 |  | 285.97 |  | 9.86 |  | 0.8207 |  | 12,896 |  |
| 1971 | 29,202.24 |  | 55.00 |  | 1.82 |  | 531.48 |  | 10.44 |  | 0.8102 |  | 23,659 |  |
| 1972 | 41,551.24 |  | 55.00 |  | 1.82 |  | 756.23 |  | 11.05 |  | 0.7991 |  | 33,203 |  |
| 1973 | 475,063.45 |  | 55.00 |  | 1.82 |  | 8,646.15 |  | 11.68 |  | 0.7876 |  | 374,179 |  |
| 1974 | 512,704.36 |  | 55.00 |  | 1.82 |  | 9,331.22 |  | 12.34 |  | 0.7756 |  | 397,674 |  |
| 1975 | 552,770.41 |  | 55.00 |  | 1.82 |  | 10,060.42 |  | 13.00 |  | 0.7636 |  | 422,118 |  |
| 1976 | 337,629.29 |  | 55.00 |  | 1.82 |  | 6,144.85 |  | 13.68 |  | 0.7513 |  | 253,651 |  |
| 1977 | 440,878.10 |  | 55.00 |  | 1.82 |  | 8,023.98 |  | 14.38 |  | 0.7386 |  | 325,611 |  |
| 1978 | 586,700.65 |  | 55.00 |  | 1.82 |  | 10,677.95 |  | 15.08 |  | 0.7258 |  | 425,839 |  |
| 1979 | 1,276,597.57 |  | 55.00 |  | 1.82 |  | 23,234.08 |  | 15.80 |  | 0.7127 |  | 909,869 |  |
| 1980 | 1,490,693.42 |  | 55.00 |  | 1.82 |  | 27,130.62 |  | 16.53 |  | 0.6995 |  | 1,042,666 |  |
| 1981 | 963,898.11 |  | 55.00 |  | 1.82 |  | 17,542.95 |  | 17.28 |  | 0.6858 |  | 661,061 |  |
| 1982 | 469,676.22 |  | 55.00 |  | 1.82 |  | 8,548.11 |  | 18.04 |  | 0.6720 |  | 315,622 |  |
| 1983 | 932,762.86 |  | 55.00 |  | 1.82 |  | 16,976.28 |  | 18.81 |  | 0.6580 |  | 613,758 |  |
| 1984 | 1,320,654.54 |  | 55.00 |  | 1.82 |  | 24,035.91 |  | 19.60 |  | 0.6436 |  | 850,026 |  |
| 1985 | 1,136,171.20 |  | 55.00 |  | 1.82 |  | 20,678.32 |  | 20.40 |  | 0.6291 |  | 714,754 |  |
| 1986 | 975,020.08 |  | 55.00 |  | 1.82 |  | 17,745.37 |  | 21.21 |  | 0.6144 |  | 599,013 |  |
| 1987 | 882,546.99 |  | 55.00 |  | 1.82 |  | 16,062.36 |  | 22.04 |  | 0.5993 |  | 528,884 |  |
| 1988 | 982,071.20 |  | 55.00 |  | 1.82 |  | 17,873.70 |  | 22.88 |  | 0.5840 |  | 573,530 |  |
| 1989 | 1,382,047.19 |  | 55.00 |  | 1.82 |  | 25,153.26 |  | 23.73 |  | 0.5686 |  | 785,763 |  |
| 1990 | 1,165,738.98 |  | 55.00 |  | 1.82 |  | 21,216.45 |  | 24.60 |  | 0.5527 |  | 644,339 |  |
| 1991 | 1,137,911.58 |  | 55.00 |  | 1.82 |  | 20,709.99 |  | 25.47 |  | 0.5369 |  | 610,956 |  |
| 1992 | 941,514.75 |  | 55.00 |  | 1.82 |  | 17,135.57 |  | 26.36 |  | 0.5207 |  | 490,275 |  |
| 1993 | 729,187.06 |  | 55.00 |  | 1.82 |  | 13,271.20 |  | 27.25 |  | 0.5046 |  | 367,911 |  |
| 1994 | 1,912,340.43 |  | 55.00 |  | 1.82 |  | 34,804.60 |  | 28.16 |  | 0.4880 |  | 933,222 |  |
| 1995 | 915,286.19 |  | 55.00 |  | 1.82 |  | 16,658.21 |  | 29.08 |  | 0.4713 |  | 431,347 |  |
| 1996 | 1,561,077.39 |  | 55.00 |  | 1.82 |  | 28,411.61 |  | 30.00 |  | 0.4546 |  | 709,588 |  |
| 1997 | 1,764,584.02 |  | 55.00 |  | 1.82 |  | 32,115.43 |  | 30.93 |  | 0.4376 |  | 772,253 |  |
| 1998 | 1,968,412.30 |  | 55.00 |  | 1.82 |  | 35,825.10 |  | 31.87 |  | 0.4206 |  | 827,816 |  |
| 1999 | 2,663,818.35 |  | 55.00 |  | 1.82 |  | 48,481.49 |  | 32.82 |  | 0.4033 |  | 1,074,238 |  |
| 2000 | 2,886,042.36 |  | 55.00 |  | 1.82 |  | 52,525.97 |  | 33.77 |  | 0.3860 |  | 1,114,012 |  |
| 2001 | 2,778,805.58 |  | 55.00 |  | 1.82 |  | 50,574.26 |  | 34.73 |  | 0.3686 |  | 1,024,129 |  |
| 2002 | 3,971,449.80 |  | 55.00 |  | 1.82 |  | 72,280.39 |  | 35.70 |  | 0.3509 |  | 1,393,621 |  |
| 2003 | 1,454,017.15 |  | 55.00 |  | 1.82 |  | 26,463.11 |  | 36.67 |  | 0.3333 |  | 484,580 |  |
| 2004 | 2,859,264.71 |  | 55.00 |  | 1.82 |  | 52,038.62 |  | 37.64 |  | 0.3156 |  | 902,498 |  |
| 2005 | 6,026,120.01 |  | 55.00 |  | 1.82 |  | 109,675.38 |  | 38.62 |  | 0.2978 |  | 1,794,699 |  |
| 2006 | 14,636,920.34 |  | 55.00 |  | 1.82 |  | 266,391.95 |  | 39.60 |  | 0.2800 |  | 4,098,338 |  |
| 2007 | 11,073,833.34 |  | 55.00 |  | 1.82 |  | 201,543.77 |  | 40.58 |  | 0.2622 |  | 2,903,338 |  |
| 2008 | 2,605,328.76 |  | 55.00 |  | 1.82 |  | 47,416.98 |  | 41.56 |  | 0.2444 |  | 636,638 |  |
| 2009 | 1,248,006.29 |  | 55.00 |  | 1.82 |  | 22,713.71 |  | 42.55 |  | 0.2264 |  | 282,499 |  |
| 2010 | 451,032.27 |  | 55.00 |  | 1.82 |  | 8,208.79 |  | 43.54 |  | 0.2084 |  | 93,977 |  |
| 2011 | 817,690.78 |  | 55.00 |  | 1.82 |  | 14,881.97 |  | 44.53 |  | 0.1904 |  | 155,656 |  |
| 2012 | 762,663.74 |  | 55.00 |  | 1.82 |  | 13,880.48 |  | 45.53 |  | 0.1722 |  | 131,315 |  |
| 2013 | 1,348,767.29 |  | 55.00 |  | 1.82 |  | 24,547.56 |  | 46.52 |  | 0.1542 |  | 207,953 |  |
| 2014 | 1,628,890.04 |  | 55.00 |  | 1.82 |  | 29,645.80 |  | 47.52 |  | 0.1360 |  | 221,529 |  |
| 2015 | 2,107,540.02 |  | 55.00 |  | 1.82 |  | 38,357.23 |  | 48.51 |  | 0.1180 |  | 248,690 |  |
| 2016 | 2,652,523.72 |  | 55.00 |  | 1.82 |  | 48,275.93 |  | 49.51 |  | 0.0998 |  | 264,775 |  |
| 2017 | 2,733,681.33 |  | 55.00 |  | 1.82 |  | 49,753.00 |  | 50.51 |  | 0.0816 |  | 223,178 |  |
| 2018 | 3,449,972.66 |  | 55.00 |  | 1.82 |  | 62,789.50 |  | 51.50 |  | 0.0636 |  | 219,556 |  |
| 2019 | 3,760,044.86 |  | 55.00 |  | 1.82 |  | 68,432.82 |  | 52.50 |  | 0.0455 |  | 170,894 |  |
| 2020 | 9,705,870.00 |  | 55.00 |  | 1.82 |  | 176,646.83 |  | 53.50 |  | 0.0273 |  | 264,679 |  |
| 2021 | 13,222,343.43 |  | 55.00 |  | 1.82 |  | 240,646.65 |  | 54.50 |  | 0.0091 |  | 120,191 |  |
|  | | | | | | | | | | | | | | |
|  | 121,915,196.80 |  |  | | | | 2,218,856.58 |  |  | | | | 33,825,615 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.82 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 44-S0 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1949 | 1,419.11 |  | 44.00 |  | 2.27 |  | 32.21 |  | 5.78 |  | 0.8686 |  | 1,233 |  |
| 1950 | 36,495.11 |  | 44.00 |  | 2.27 |  | 828.44 |  | 6.17 |  | 0.8598 |  | 31,377 |  |
| 1951 | 53,363.70 |  | 44.00 |  | 2.27 |  | 1,211.36 |  | 6.55 |  | 0.8511 |  | 45,420 |  |
| 1952 | 89,399.77 |  | 44.00 |  | 2.27 |  | 2,029.37 |  | 6.94 |  | 0.8423 |  | 75,299 |  |
| 1953 | 84,428.60 |  | 44.00 |  | 2.27 |  | 1,916.53 |  | 7.33 |  | 0.8334 |  | 70,364 |  |
| 1954 | 134,579.06 |  | 44.00 |  | 2.27 |  | 3,054.94 |  | 7.72 |  | 0.8246 |  | 110,967 |  |
| 1955 | 171,318.04 |  | 44.00 |  | 2.27 |  | 3,888.92 |  | 8.11 |  | 0.8157 |  | 139,741 |  |
| 1956 | 190,129.23 |  | 44.00 |  | 2.27 |  | 4,315.93 |  | 8.50 |  | 0.8068 |  | 153,400 |  |
| 1957 | 157,466.45 |  | 44.00 |  | 2.27 |  | 3,574.49 |  | 8.90 |  | 0.7977 |  | 125,616 |  |
| 1958 | 188,931.26 |  | 44.00 |  | 2.27 |  | 4,288.74 |  | 9.30 |  | 0.7886 |  | 148,999 |  |
| 1959 | 253,523.54 |  | 44.00 |  | 2.27 |  | 5,754.98 |  | 9.70 |  | 0.7796 |  | 197,634 |  |
| 1960 | 35,587.23 |  | 44.00 |  | 2.27 |  | 807.83 |  | 10.10 |  | 0.7705 |  | 27,418 |  |
| 1961 | 68,732.54 |  | 44.00 |  | 2.27 |  | 1,560.23 |  | 10.50 |  | 0.7614 |  | 52,330 |  |
| 1962 | 82,760.96 |  | 44.00 |  | 2.27 |  | 1,878.67 |  | 10.90 |  | 0.7523 |  | 62,259 |  |
| 1963 | 82,220.28 |  | 44.00 |  | 2.27 |  | 1,866.40 |  | 11.31 |  | 0.7430 |  | 61,086 |  |
| 1964 | 50,575.08 |  | 44.00 |  | 2.27 |  | 1,148.05 |  | 11.72 |  | 0.7336 |  | 37,104 |  |
| 1965 | 49,076.13 |  | 44.00 |  | 2.27 |  | 1,114.03 |  | 12.13 |  | 0.7243 |  | 35,547 |  |
| 1966 | 32,050.83 |  | 44.00 |  | 2.27 |  | 727.55 |  | 12.55 |  | 0.7148 |  | 22,909 |  |
| 1967 | 47,966.34 |  | 44.00 |  | 2.27 |  | 1,088.84 |  | 12.96 |  | 0.7055 |  | 33,838 |  |
| 1968 | 60,072.70 |  | 44.00 |  | 2.27 |  | 1,363.65 |  | 13.38 |  | 0.6959 |  | 41,805 |  |
| 1969 | 1,412,363.81 |  | 44.00 |  | 2.27 |  | 32,060.66 |  | 13.80 |  | 0.6864 |  | 969,390 |  |
| 1970 | 3,314,404.58 |  | 44.00 |  | 2.27 |  | 75,236.98 |  | 14.23 |  | 0.6766 |  | 2,242,493 |  |
| 1971 | 2,713,217.60 |  | 44.00 |  | 2.27 |  | 61,590.04 |  | 14.65 |  | 0.6671 |  | 1,809,852 |  |
| 1972 | 3,817,110.11 |  | 44.00 |  | 2.27 |  | 86,648.40 |  | 15.08 |  | 0.6573 |  | 2,508,872 |  |
| 1973 | 3,954,985.39 |  | 44.00 |  | 2.27 |  | 89,778.17 |  | 15.51 |  | 0.6475 |  | 2,560,853 |  |
| 1974 | 3,826,583.75 |  | 44.00 |  | 2.27 |  | 86,863.45 |  | 15.95 |  | 0.6375 |  | 2,439,447 |  |
| 1975 | 4,559,290.60 |  | 44.00 |  | 2.27 |  | 103,495.90 |  | 16.39 |  | 0.6275 |  | 2,860,955 |  |
| 1976 | 3,687,861.10 |  | 44.00 |  | 2.27 |  | 83,714.45 |  | 16.83 |  | 0.6175 |  | 2,277,254 |  |
| 1977 | 3,396,224.35 |  | 44.00 |  | 2.27 |  | 77,094.29 |  | 17.27 |  | 0.6075 |  | 2,063,206 |  |
| 1978 | 2,148,952.13 |  | 44.00 |  | 2.27 |  | 48,781.21 |  | 17.72 |  | 0.5973 |  | 1,283,505 |  |
| 1979 | 5,035,111.65 |  | 44.00 |  | 2.27 |  | 114,297.03 |  | 18.17 |  | 0.5871 |  | 2,955,862 |  |
| 1980 | 7,290,246.93 |  | 44.00 |  | 2.27 |  | 165,488.61 |  | 18.62 |  | 0.5768 |  | 4,205,160 |  |
| 1981 | 5,726,414.20 |  | 44.00 |  | 2.27 |  | 129,989.60 |  | 19.08 |  | 0.5664 |  | 3,243,212 |  |
| 1982 | 4,881,786.06 |  | 44.00 |  | 2.27 |  | 110,816.54 |  | 19.54 |  | 0.5559 |  | 2,713,834 |  |
| 1983 | 10,029,602.54 |  | 44.00 |  | 2.27 |  | 227,671.98 |  | 20.01 |  | 0.5452 |  | 5,468,440 |  |
| 1984 | 11,137,944.27 |  | 44.00 |  | 2.27 |  | 252,831.33 |  | 20.48 |  | 0.5346 |  | 5,953,788 |  |
| 1985 | 12,161,432.43 |  | 44.00 |  | 2.27 |  | 276,064.52 |  | 20.95 |  | 0.5239 |  | 6,370,888 |  |
| 1986 | 16,412,980.77 |  | 44.00 |  | 2.27 |  | 372,574.66 |  | 21.43 |  | 0.5130 |  | 8,419,038 |  |
| 1987 | 17,231,217.93 |  | 44.00 |  | 2.27 |  | 391,148.65 |  | 21.91 |  | 0.5021 |  | 8,650,933 |  |
| 1988 | 21,683,863.46 |  | 44.00 |  | 2.27 |  | 492,223.70 |  | 22.40 |  | 0.4909 |  | 10,644,825 |  |
| 1989 | 28,316,677.14 |  | 44.00 |  | 2.27 |  | 642,788.57 |  | 22.89 |  | 0.4798 |  | 13,585,492 |  |
| 1990 | 33,444,329.15 |  | 44.00 |  | 2.27 |  | 759,186.27 |  | 23.39 |  | 0.4684 |  | 15,665,658 |  |
| 1991 | 25,239,335.77 |  | 44.00 |  | 2.27 |  | 572,932.92 |  | 23.89 |  | 0.4571 |  | 11,535,638 |  |
| 1992 | 22,731,968.84 |  | 44.00 |  | 2.27 |  | 516,015.69 |  | 24.40 |  | 0.4455 |  | 10,125,956 |  |
| 1993 | 23,529,284.85 |  | 44.00 |  | 2.27 |  | 534,114.77 |  | 24.91 |  | 0.4339 |  | 10,208,416 |  |
| 1994 | 25,003,357.60 |  | 44.00 |  | 2.27 |  | 567,576.22 |  | 25.43 |  | 0.4221 |  | 10,552,667 |  |
| 1995 | 27,583,964.35 |  | 44.00 |  | 2.27 |  | 626,155.99 |  | 25.96 |  | 0.4100 |  | 11,309,425 |  |
| 1996 | 29,741,713.19 |  | 44.00 |  | 2.27 |  | 675,136.89 |  | 26.49 |  | 0.3980 |  | 11,835,715 |  |
| 1997 | 32,256,670.75 |  | 44.00 |  | 2.27 |  | 732,226.43 |  | 27.03 |  | 0.3857 |  | 12,440,753 |  |
| 1998 | 38,368,244.48 |  | 44.00 |  | 2.27 |  | 870,959.15 |  | 27.57 |  | 0.3734 |  | 14,327,086 |  |
| 1999 | 40,697,924.99 |  | 44.00 |  | 2.27 |  | 923,842.90 |  | 28.13 |  | 0.3607 |  | 14,678,928 |  |
| 2000 | 57,758,612.97 |  | 44.00 |  | 2.27 |  | 1,311,120.51 |  | 28.69 |  | 0.3480 |  | 20,097,109 |  |
| 2001 | 56,962,238.00 |  | 44.00 |  | 2.27 |  | 1,293,042.80 |  | 29.26 |  | 0.3350 |  | 19,082,350 |  |
| 2002 | 65,003,477.15 |  | 44.00 |  | 2.27 |  | 1,475,578.93 |  | 29.84 |  | 0.3218 |  | 20,919,419 |  |
| 2003 | 68,194,705.71 |  | 44.00 |  | 2.27 |  | 1,548,019.82 |  | 30.43 |  | 0.3084 |  | 21,031,929 |  |
| 2004 | 65,913,392.84 |  | 44.00 |  | 2.27 |  | 1,496,234.02 |  | 31.02 |  | 0.2950 |  | 19,444,451 |  |
| 2005 | 78,920,799.27 |  | 44.00 |  | 2.27 |  | 1,791,502.14 |  | 31.63 |  | 0.2811 |  | 22,187,794 |  |
| 2006 | 103,223,811.01 |  | 44.00 |  | 2.27 |  | 2,343,180.51 |  | 32.25 |  | 0.2671 |  | 27,565,919 |  |
| 2007 | 104,419,652.92 |  | 44.00 |  | 2.27 |  | 2,370,326.12 |  | 32.88 |  | 0.2527 |  | 26,389,979 |  |
| 2008 | 78,686,436.82 |  | 44.00 |  | 2.27 |  | 1,786,182.12 |  | 33.52 |  | 0.2382 |  | 18,741,536 |  |
| 2009 | 62,197,392.86 |  | 44.00 |  | 2.27 |  | 1,411,880.82 |  | 34.17 |  | 0.2234 |  | 13,895,520 |  |
| 2010 | 45,933,008.90 |  | 44.00 |  | 2.27 |  | 1,042,679.30 |  | 34.84 |  | 0.2082 |  | 9,562,334 |  |
| 2011 | 70,568,952.58 |  | 44.00 |  | 2.27 |  | 1,601,915.22 |  | 35.53 |  | 0.1925 |  | 13,584,523 |  |
| 2012 | 73,869,274.18 |  | 44.00 |  | 2.27 |  | 1,676,832.52 |  | 36.22 |  | 0.1768 |  | 13,061,565 |  |
| 2013 | 78,150,094.94 |  | 44.00 |  | 2.27 |  | 1,774,007.16 |  | 36.94 |  | 0.1605 |  | 12,539,183 |  |
| 2014 | 93,409,782.46 |  | 44.00 |  | 2.27 |  | 2,120,402.06 |  | 37.67 |  | 0.1439 |  | 13,437,931 |  |
| 2015 | 119,812,294.83 |  | 44.00 |  | 2.27 |  | 2,719,739.09 |  | 38.43 |  | 0.1266 |  | 15,167,038 |  |
| 2016 | 127,881,477.59 |  | 44.00 |  | 2.27 |  | 2,902,909.54 |  | 39.20 |  | 0.1091 |  | 13,950,590 |  |
| 2017 | 118,540,880.68 |  | 44.00 |  | 2.27 |  | 2,690,877.99 |  | 40.00 |  | 0.0909 |  | 10,776,551 |  |
| 2018 | 160,867,579.44 |  | 44.00 |  | 2.27 |  | 3,651,694.05 |  | 40.83 |  | 0.0721 |  | 11,590,509 |  |
| 2019 | 180,212,978.73 |  | 44.00 |  | 2.27 |  | 4,090,834.62 |  | 41.69 |  | 0.0525 |  | 9,461,181 |  |
| 2020 | 243,335,909.38 |  | 44.00 |  | 2.27 |  | 5,523,725.14 |  | 42.58 |  | 0.0323 |  | 7,852,450 |  |
| 2021 | 275,224,588.19 |  | 44.00 |  | 2.27 |  | 6,247,598.15 |  | 43.51 |  | 0.0111 |  | 3,066,002 |  |
|  | | | | | | | | | | | | | | |
|  | 2,802,292,502.18 |  |  | | | | 63,612,039.76 |  |  | | | | 560,787,750 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.27 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 40-S0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 0.51 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 1 |  |
| 1942 | 5.75 |  | 40.00 |  | 2.50 |  | 0.14 |  | 0.21 |  | 0.9948 |  | 6 |  |
| 1944 | 8.87 |  | 40.00 |  | 2.50 |  | 0.22 |  | 0.90 |  | 0.9775 |  | 9 |  |
| 1945 | 162.11 |  | 40.00 |  | 2.50 |  | 4.05 |  | 1.25 |  | 0.9688 |  | 157 |  |
| 1946 | 19.38 |  | 40.00 |  | 2.50 |  | 0.48 |  | 1.59 |  | 0.9603 |  | 19 |  |
| 1947 | 62.95 |  | 40.00 |  | 2.50 |  | 1.57 |  | 1.93 |  | 0.9518 |  | 60 |  |
| 1948 | 14.47 |  | 40.00 |  | 2.50 |  | 0.36 |  | 2.27 |  | 0.9433 |  | 14 |  |
| 1949 | 2,244.92 |  | 40.00 |  | 2.50 |  | 56.12 |  | 2.61 |  | 0.9348 |  | 2,098 |  |
| 1950 | 359.27 |  | 40.00 |  | 2.50 |  | 8.98 |  | 2.95 |  | 0.9263 |  | 333 |  |
| 1951 | 5,155.48 |  | 40.00 |  | 2.50 |  | 128.89 |  | 3.28 |  | 0.9180 |  | 4,733 |  |
| 1952 | 866.29 |  | 40.00 |  | 2.50 |  | 21.66 |  | 3.62 |  | 0.9095 |  | 788 |  |
| 1953 | 1,533.39 |  | 40.00 |  | 2.50 |  | 38.33 |  | 3.95 |  | 0.9013 |  | 1,382 |  |
| 1954 | 204.72 |  | 40.00 |  | 2.50 |  | 5.12 |  | 4.29 |  | 0.8928 |  | 183 |  |
| 1955 | 2,708.48 |  | 40.00 |  | 2.50 |  | 67.71 |  | 4.62 |  | 0.8845 |  | 2,396 |  |
| 1956 | 2,388.65 |  | 40.00 |  | 2.50 |  | 59.72 |  | 4.96 |  | 0.8760 |  | 2,092 |  |
| 1957 | 1,491.26 |  | 40.00 |  | 2.50 |  | 37.28 |  | 5.29 |  | 0.8678 |  | 1,294 |  |
| 1958 | 4,952.75 |  | 40.00 |  | 2.50 |  | 123.82 |  | 5.63 |  | 0.8593 |  | 4,256 |  |
| 1959 | 11,825.95 |  | 40.00 |  | 2.50 |  | 295.65 |  | 5.97 |  | 0.8508 |  | 10,061 |  |
| 1960 | 578,867.35 |  | 40.00 |  | 2.50 |  | 14,471.68 |  | 6.31 |  | 0.8423 |  | 487,551 |  |
| 1961 | 176,654.57 |  | 40.00 |  | 2.50 |  | 4,416.36 |  | 6.65 |  | 0.8338 |  | 147,286 |  |
| 1962 | 220,788.32 |  | 40.00 |  | 2.50 |  | 5,519.71 |  | 7.00 |  | 0.8250 |  | 182,150 |  |
| 1963 | 229,546.06 |  | 40.00 |  | 2.50 |  | 5,738.65 |  | 7.34 |  | 0.8165 |  | 187,424 |  |
| 1964 | 397,093.73 |  | 40.00 |  | 2.50 |  | 9,927.34 |  | 7.69 |  | 0.8078 |  | 320,752 |  |
| 1965 | 18,800.65 |  | 40.00 |  | 2.50 |  | 470.02 |  | 8.04 |  | 0.7990 |  | 15,022 |  |
| 1966 | 194,906.70 |  | 40.00 |  | 2.50 |  | 4,872.67 |  | 8.40 |  | 0.7900 |  | 153,976 |  |
| 1967 | 568,768.25 |  | 40.00 |  | 2.50 |  | 14,219.21 |  | 8.75 |  | 0.7813 |  | 444,350 |  |
| 1968 | 294,765.32 |  | 40.00 |  | 2.50 |  | 7,369.13 |  | 9.11 |  | 0.7723 |  | 227,633 |  |
| 1969 | 633,158.59 |  | 40.00 |  | 2.50 |  | 15,828.96 |  | 9.48 |  | 0.7630 |  | 483,100 |  |
| 1970 | 4,122,504.26 |  | 40.00 |  | 2.50 |  | 103,062.61 |  | 9.84 |  | 0.7540 |  | 3,108,368 |  |
| 1971 | 2,182,917.61 |  | 40.00 |  | 2.50 |  | 54,572.94 |  | 10.21 |  | 0.7448 |  | 1,625,728 |  |
| 1972 | 2,397,574.25 |  | 40.00 |  | 2.50 |  | 59,939.36 |  | 10.59 |  | 0.7353 |  | 1,762,816 |  |
| 1973 | 7,041,713.21 |  | 40.00 |  | 2.50 |  | 176,042.83 |  | 10.97 |  | 0.7258 |  | 5,110,523 |  |
| 1974 | 7,682,086.54 |  | 40.00 |  | 2.50 |  | 192,052.16 |  | 11.35 |  | 0.7163 |  | 5,502,294 |  |
| 1975 | 10,457,296.47 |  | 40.00 |  | 2.50 |  | 261,432.41 |  | 11.74 |  | 0.7065 |  | 7,388,080 |  |
| 1976 | 7,276,590.92 |  | 40.00 |  | 2.50 |  | 181,914.77 |  | 12.13 |  | 0.6968 |  | 5,069,965 |  |
| 1977 | 9,749,233.69 |  | 40.00 |  | 2.50 |  | 243,730.84 |  | 12.52 |  | 0.6870 |  | 6,697,724 |  |
| 1978 | 12,229,898.43 |  | 40.00 |  | 2.50 |  | 305,747.46 |  | 12.92 |  | 0.6770 |  | 8,279,641 |  |
| 1979 | 27,655,104.45 |  | 40.00 |  | 2.50 |  | 691,377.61 |  | 13.33 |  | 0.6668 |  | 18,439,041 |  |
| 1980 | 30,704,432.64 |  | 40.00 |  | 2.50 |  | 767,610.82 |  | 13.74 |  | 0.6565 |  | 20,157,460 |  |
| 1981 | 22,081,303.89 |  | 40.00 |  | 2.50 |  | 552,032.60 |  | 14.16 |  | 0.6460 |  | 14,264,522 |  |
| 1982 | 11,559,463.34 |  | 40.00 |  | 2.50 |  | 288,986.58 |  | 14.59 |  | 0.6353 |  | 7,343,149 |  |
| 1983 | 21,761,747.07 |  | 40.00 |  | 2.50 |  | 544,043.68 |  | 15.02 |  | 0.6245 |  | 13,590,211 |  |
| 1984 | 28,226,804.70 |  | 40.00 |  | 2.50 |  | 705,670.12 |  | 15.45 |  | 0.6138 |  | 17,324,201 |  |
| 1985 | 22,058,819.92 |  | 40.00 |  | 2.50 |  | 551,470.50 |  | 15.90 |  | 0.6025 |  | 13,290,439 |  |
| 1986 | 9,474,373.52 |  | 40.00 |  | 2.50 |  | 236,859.34 |  | 16.35 |  | 0.5913 |  | 5,601,723 |  |
| 1987 | 3,920,050.80 |  | 40.00 |  | 2.50 |  | 98,001.27 |  | 16.80 |  | 0.5800 |  | 2,273,629 |  |
| 1988 | 2,357,953.68 |  | 40.00 |  | 2.50 |  | 58,948.84 |  | 17.27 |  | 0.5683 |  | 1,339,907 |  |
| 1989 | 4,797,803.75 |  | 40.00 |  | 2.50 |  | 119,945.09 |  | 17.74 |  | 0.5565 |  | 2,669,978 |  |
| 1990 | 5,936,116.34 |  | 40.00 |  | 2.50 |  | 148,402.91 |  | 18.22 |  | 0.5445 |  | 3,232,215 |  |
| 1991 | 4,468,948.71 |  | 40.00 |  | 2.50 |  | 111,723.72 |  | 18.71 |  | 0.5323 |  | 2,378,598 |  |
| 1992 | 4,155,159.81 |  | 40.00 |  | 2.50 |  | 103,879.00 |  | 19.21 |  | 0.5198 |  | 2,159,644 |  |
| 1993 | 5,254,158.51 |  | 40.00 |  | 2.50 |  | 131,353.96 |  | 19.72 |  | 0.5070 |  | 2,663,858 |  |
| 1994 | 7,518,420.31 |  | 40.00 |  | 2.50 |  | 187,960.51 |  | 20.24 |  | 0.4940 |  | 3,714,100 |  |
| 1995 | 8,101,561.06 |  | 40.00 |  | 2.50 |  | 202,539.03 |  | 20.77 |  | 0.4808 |  | 3,894,825 |  |
| 1996 | 7,299,465.90 |  | 40.00 |  | 2.50 |  | 182,486.65 |  | 21.30 |  | 0.4675 |  | 3,412,500 |  |
| 1997 | 9,326,714.15 |  | 40.00 |  | 2.50 |  | 233,167.85 |  | 21.85 |  | 0.4538 |  | 4,231,997 |  |
| 1998 | 8,180,804.36 |  | 40.00 |  | 2.50 |  | 204,520.11 |  | 22.41 |  | 0.4398 |  | 3,597,509 |  |
| 1999 | 12,718,106.48 |  | 40.00 |  | 2.50 |  | 317,952.66 |  | 22.98 |  | 0.4255 |  | 5,411,554 |  |
| 2000 | 16,304,252.83 |  | 40.00 |  | 2.50 |  | 407,606.32 |  | 23.57 |  | 0.4108 |  | 6,696,972 |  |
| 2001 | 20,127,320.49 |  | 40.00 |  | 2.50 |  | 503,183.01 |  | 24.16 |  | 0.3960 |  | 7,970,419 |  |
| 2002 | 18,347,373.06 |  | 40.00 |  | 2.50 |  | 458,684.33 |  | 24.77 |  | 0.3808 |  | 6,985,762 |  |
| 2003 | 14,405,661.22 |  | 40.00 |  | 2.50 |  | 360,141.53 |  | 25.39 |  | 0.3653 |  | 5,261,668 |  |
| 2004 | 12,357,521.68 |  | 40.00 |  | 2.50 |  | 308,938.04 |  | 26.03 |  | 0.3493 |  | 4,315,864 |  |
| 2005 | 18,009,278.14 |  | 40.00 |  | 2.50 |  | 450,231.95 |  | 26.68 |  | 0.3330 |  | 5,997,090 |  |
| 2006 | 19,351,933.48 |  | 40.00 |  | 2.50 |  | 483,798.34 |  | 27.34 |  | 0.3165 |  | 6,124,887 |  |
| 2007 | 21,760,470.92 |  | 40.00 |  | 2.50 |  | 544,011.77 |  | 28.03 |  | 0.2993 |  | 6,511,821 |  |
| 2008 | 14,573,622.33 |  | 40.00 |  | 2.50 |  | 364,340.56 |  | 28.72 |  | 0.2820 |  | 4,109,761 |  |
| 2009 | 14,209,126.95 |  | 40.00 |  | 2.50 |  | 355,228.17 |  | 29.44 |  | 0.2640 |  | 3,751,210 |  |
| 2010 | 10,852,633.30 |  | 40.00 |  | 2.50 |  | 271,315.83 |  | 30.17 |  | 0.2458 |  | 2,667,035 |  |
| 2011 | 22,699,870.18 |  | 40.00 |  | 2.50 |  | 567,496.75 |  | 30.91 |  | 0.2273 |  | 5,158,545 |  |
| 2012 | 17,985,833.77 |  | 40.00 |  | 2.50 |  | 449,645.84 |  | 31.68 |  | 0.2080 |  | 3,741,053 |  |
| 2013 | 20,358,078.41 |  | 40.00 |  | 2.50 |  | 508,951.96 |  | 32.47 |  | 0.1883 |  | 3,832,408 |  |
| 2014 | 24,074,347.16 |  | 40.00 |  | 2.50 |  | 601,858.68 |  | 33.27 |  | 0.1683 |  | 4,050,509 |  |
| 2015 | 20,086,888.35 |  | 40.00 |  | 2.50 |  | 502,172.21 |  | 34.10 |  | 0.1475 |  | 2,962,816 |  |
| 2016 | 23,472,980.18 |  | 40.00 |  | 2.50 |  | 586,824.50 |  | 34.94 |  | 0.1265 |  | 2,969,332 |  |
| 2017 | 27,270,312.50 |  | 40.00 |  | 2.50 |  | 681,757.81 |  | 35.81 |  | 0.1048 |  | 2,856,565 |  |
| 2018 | 48,665,372.82 |  | 40.00 |  | 2.50 |  | 1,216,634.32 |  | 36.70 |  | 0.0825 |  | 4,014,893 |  |
| 2019 | 68,961,093.02 |  | 40.00 |  | 2.50 |  | 1,724,027.33 |  | 37.61 |  | 0.0598 |  | 4,120,425 |  |
| 2020 | 66,685,255.18 |  | 40.00 |  | 2.50 |  | 1,667,131.38 |  | 38.54 |  | 0.0365 |  | 2,434,012 |  |
| 2021 | 72,020,895.64 |  | 40.00 |  | 2.50 |  | 1,800,522.39 |  | 39.51 |  | 0.0123 |  | 882,256 |  |
|  | | | | | | | | | | | | | | |
|  | 916,624,605.12 |  |  | | | | 22,915,615.08 |  |  | | | | 295,630,628 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.50 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 40-R0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1936 | 36.22 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 36 |  |
| 1937 | 2,025.02 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 2,025 |  |
| 1938 | 872.82 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 873 |  |
| 1939 | 2,127.36 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 2,127 |  |
| 1940 | 2,256.20 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 2,256 |  |
| 1941 | 4,313.47 |  | 40.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,313 |  |
| 1942 | 757.91 |  | 40.00 |  | 2.50 |  | 18.95 |  | 0.25 |  | 0.9938 |  | 753 |  |
| 1943 | 1,493.46 |  | 40.00 |  | 2.50 |  | 37.34 |  | 0.74 |  | 0.9815 |  | 1,466 |  |
| 1944 | 4,165.89 |  | 40.00 |  | 2.50 |  | 104.15 |  | 1.23 |  | 0.9693 |  | 4,038 |  |
| 1945 | 9,841.56 |  | 40.00 |  | 2.50 |  | 246.04 |  | 1.70 |  | 0.9575 |  | 9,423 |  |
| 1946 | 10,599.26 |  | 40.00 |  | 2.50 |  | 264.98 |  | 2.18 |  | 0.9455 |  | 10,022 |  |
| 1947 | 26,011.26 |  | 40.00 |  | 2.50 |  | 650.28 |  | 2.64 |  | 0.9340 |  | 24,295 |  |
| 1948 | 105,542.70 |  | 40.00 |  | 2.50 |  | 2,638.57 |  | 3.10 |  | 0.9225 |  | 97,363 |  |
| 1949 | 54,304.66 |  | 40.00 |  | 2.50 |  | 1,357.62 |  | 3.55 |  | 0.9113 |  | 49,485 |  |
| 1950 | 102,929.79 |  | 40.00 |  | 2.50 |  | 2,573.24 |  | 3.99 |  | 0.9003 |  | 92,663 |  |
| 1951 | 139,426.40 |  | 40.00 |  | 2.50 |  | 3,485.66 |  | 4.42 |  | 0.8895 |  | 124,020 |  |
| 1952 | 302,493.62 |  | 40.00 |  | 2.50 |  | 7,562.34 |  | 4.84 |  | 0.8790 |  | 265,892 |  |
| 1953 | 312,023.56 |  | 40.00 |  | 2.50 |  | 7,800.59 |  | 5.26 |  | 0.8685 |  | 270,992 |  |
| 1954 | 304,803.48 |  | 40.00 |  | 2.50 |  | 7,620.09 |  | 5.67 |  | 0.8583 |  | 261,598 |  |
| 1955 | 309,609.73 |  | 40.00 |  | 2.50 |  | 7,740.24 |  | 6.07 |  | 0.8483 |  | 262,626 |  |
| 1956 | 598,161.77 |  | 40.00 |  | 2.50 |  | 14,954.04 |  | 6.47 |  | 0.8383 |  | 501,409 |  |
| 1957 | 721,736.10 |  | 40.00 |  | 2.50 |  | 18,043.40 |  | 6.87 |  | 0.8283 |  | 597,778 |  |
| 1958 | 710,688.16 |  | 40.00 |  | 2.50 |  | 17,767.20 |  | 7.27 |  | 0.8183 |  | 581,521 |  |
| 1959 | 833,081.32 |  | 40.00 |  | 2.50 |  | 20,827.03 |  | 7.67 |  | 0.8083 |  | 673,338 |  |
| 1960 | 765,965.03 |  | 40.00 |  | 2.50 |  | 19,149.13 |  | 8.06 |  | 0.7985 |  | 611,623 |  |
| 1961 | 839,235.97 |  | 40.00 |  | 2.50 |  | 20,980.90 |  | 8.46 |  | 0.7885 |  | 661,738 |  |
| 1962 | 835,488.43 |  | 40.00 |  | 2.50 |  | 20,887.21 |  | 8.85 |  | 0.7788 |  | 650,637 |  |
| 1963 | 889,375.69 |  | 40.00 |  | 2.50 |  | 22,234.39 |  | 9.25 |  | 0.7688 |  | 683,708 |  |
| 1964 | 1,178,292.46 |  | 40.00 |  | 2.50 |  | 29,457.31 |  | 9.65 |  | 0.7588 |  | 894,029 |  |
| 1965 | 1,335,860.29 |  | 40.00 |  | 2.50 |  | 33,396.51 |  | 10.06 |  | 0.7485 |  | 999,891 |  |
| 1966 | 1,487,644.98 |  | 40.00 |  | 2.50 |  | 37,191.12 |  | 10.46 |  | 0.7385 |  | 1,098,626 |  |
| 1967 | 2,069,460.37 |  | 40.00 |  | 2.50 |  | 51,736.51 |  | 10.87 |  | 0.7283 |  | 1,507,085 |  |
| 1968 | 2,913,377.07 |  | 40.00 |  | 2.50 |  | 72,834.43 |  | 11.28 |  | 0.7180 |  | 2,091,805 |  |
| 1969 | 3,249,189.32 |  | 40.00 |  | 2.50 |  | 81,229.73 |  | 11.69 |  | 0.7078 |  | 2,299,614 |  |
| 1970 | 4,451,632.60 |  | 40.00 |  | 2.50 |  | 111,290.82 |  | 12.11 |  | 0.6973 |  | 3,103,901 |  |
| 1971 | 3,833,945.07 |  | 40.00 |  | 2.50 |  | 95,848.63 |  | 12.53 |  | 0.6868 |  | 2,632,962 |  |
| 1972 | 4,618,307.72 |  | 40.00 |  | 2.50 |  | 115,457.69 |  | 12.96 |  | 0.6760 |  | 3,121,976 |  |
| 1973 | 4,155,090.86 |  | 40.00 |  | 2.50 |  | 103,877.27 |  | 13.39 |  | 0.6653 |  | 2,764,174 |  |
| 1974 | 7,249,342.79 |  | 40.00 |  | 2.50 |  | 181,233.57 |  | 13.83 |  | 0.6543 |  | 4,742,883 |  |
| 1975 | 5,078,898.44 |  | 40.00 |  | 2.50 |  | 126,972.46 |  | 14.27 |  | 0.6433 |  | 3,267,001 |  |
| 1976 | 3,423,311.24 |  | 40.00 |  | 2.50 |  | 85,582.78 |  | 14.72 |  | 0.6320 |  | 2,163,533 |  |
| 1977 | 6,031,192.40 |  | 40.00 |  | 2.50 |  | 150,779.81 |  | 15.17 |  | 0.6208 |  | 3,743,863 |  |
| 1978 | 9,412,677.63 |  | 40.00 |  | 2.50 |  | 235,316.94 |  | 15.63 |  | 0.6093 |  | 5,734,674 |  |
| 1979 | 14,420,289.08 |  | 40.00 |  | 2.50 |  | 360,507.23 |  | 16.09 |  | 0.5978 |  | 8,619,728 |  |
| 1980 | 17,501,103.73 |  | 40.00 |  | 2.50 |  | 437,527.59 |  | 16.56 |  | 0.5860 |  | 10,255,647 |  |
| 1981 | 19,547,023.15 |  | 40.00 |  | 2.50 |  | 488,675.58 |  | 17.03 |  | 0.5743 |  | 11,224,878 |  |
| 1982 | 17,421,013.49 |  | 40.00 |  | 2.50 |  | 435,525.34 |  | 17.51 |  | 0.5623 |  | 9,794,965 |  |
| 1983 | 24,351,512.71 |  | 40.00 |  | 2.50 |  | 608,787.82 |  | 18.00 |  | 0.5500 |  | 13,393,332 |  |
| 1984 | 36,209,119.31 |  | 40.00 |  | 2.50 |  | 905,227.98 |  | 18.49 |  | 0.5378 |  | 19,471,454 |  |
| 1985 | 26,466,487.05 |  | 40.00 |  | 2.50 |  | 661,662.18 |  | 18.98 |  | 0.5255 |  | 13,908,139 |  |
| 1986 | 32,435,123.48 |  | 40.00 |  | 2.50 |  | 810,878.09 |  | 19.49 |  | 0.5128 |  | 16,631,110 |  |
| 1987 | 35,786,995.28 |  | 40.00 |  | 2.50 |  | 894,674.88 |  | 20.00 |  | 0.5000 |  | 17,893,498 |  |
| 1988 | 35,652,221.47 |  | 40.00 |  | 2.50 |  | 891,305.54 |  | 20.51 |  | 0.4873 |  | 17,371,545 |  |
| 1989 | 43,940,885.07 |  | 40.00 |  | 2.50 |  | 1,098,522.13 |  | 21.03 |  | 0.4743 |  | 20,838,965 |  |
| 1990 | 47,145,813.18 |  | 40.00 |  | 2.50 |  | 1,178,645.33 |  | 21.56 |  | 0.4610 |  | 21,734,220 |  |
| 1991 | 42,285,940.78 |  | 40.00 |  | 2.50 |  | 1,057,148.52 |  | 22.09 |  | 0.4478 |  | 18,933,530 |  |
| 1992 | 45,111,315.18 |  | 40.00 |  | 2.50 |  | 1,127,782.88 |  | 22.62 |  | 0.4345 |  | 19,600,866 |  |
| 1993 | 29,423,858.23 |  | 40.00 |  | 2.50 |  | 735,596.46 |  | 23.17 |  | 0.4208 |  | 12,380,088 |  |
| 1994 | 34,809,537.61 |  | 40.00 |  | 2.50 |  | 870,238.44 |  | 23.71 |  | 0.4073 |  | 14,176,184 |  |
| 1995 | 36,466,656.94 |  | 40.00 |  | 2.50 |  | 911,666.42 |  | 24.26 |  | 0.3935 |  | 14,349,630 |  |
| 1996 | 39,840,907.64 |  | 40.00 |  | 2.50 |  | 996,022.69 |  | 24.82 |  | 0.3795 |  | 15,119,624 |  |
| 1997 | 48,085,361.93 |  | 40.00 |  | 2.50 |  | 1,202,134.05 |  | 25.38 |  | 0.3655 |  | 17,575,200 |  |
| 1998 | 58,135,631.80 |  | 40.00 |  | 2.50 |  | 1,453,390.80 |  | 25.95 |  | 0.3513 |  | 20,420,141 |  |
| 1999 | 60,759,198.81 |  | 40.00 |  | 2.50 |  | 1,518,979.97 |  | 26.52 |  | 0.3370 |  | 20,475,850 |  |
| 2000 | 59,698,147.84 |  | 40.00 |  | 2.50 |  | 1,492,453.70 |  | 27.09 |  | 0.3228 |  | 19,267,577 |  |
| 2001 | 54,470,053.03 |  | 40.00 |  | 2.50 |  | 1,361,751.33 |  | 27.67 |  | 0.3083 |  | 16,790,394 |  |
| 2002 | 53,241,037.94 |  | 40.00 |  | 2.50 |  | 1,331,025.95 |  | 28.25 |  | 0.2938 |  | 15,639,555 |  |
| 2003 | 58,925,392.26 |  | 40.00 |  | 2.50 |  | 1,473,134.81 |  | 28.83 |  | 0.2793 |  | 16,454,916 |  |
| 2004 | 68,383,597.53 |  | 40.00 |  | 2.50 |  | 1,709,589.94 |  | 29.42 |  | 0.2645 |  | 18,087,462 |  |
| 2005 | 70,833,666.61 |  | 40.00 |  | 2.50 |  | 1,770,841.67 |  | 30.01 |  | 0.2498 |  | 17,690,708 |  |
| 2006 | 123,180,794.61 |  | 40.00 |  | 2.50 |  | 3,079,519.87 |  | 30.60 |  | 0.2350 |  | 28,947,487 |  |
| 2007 | 119,214,530.70 |  | 40.00 |  | 2.50 |  | 2,980,363.27 |  | 31.19 |  | 0.2203 |  | 26,257,000 |  |
| 2008 | 106,142,199.23 |  | 40.00 |  | 2.50 |  | 2,653,554.98 |  | 31.79 |  | 0.2053 |  | 21,785,686 |  |
| 2009 | 134,374,449.85 |  | 40.00 |  | 2.50 |  | 3,359,361.25 |  | 32.39 |  | 0.1903 |  | 25,564,739 |  |
| 2010 | 113,044,231.43 |  | 40.00 |  | 2.50 |  | 2,826,105.79 |  | 32.99 |  | 0.1753 |  | 19,811,002 |  |
| 2011 | 77,789,351.06 |  | 40.00 |  | 2.50 |  | 1,944,733.78 |  | 33.59 |  | 0.1603 |  | 12,465,744 |  |
| 2012 | 17,633,184.03 |  | 40.00 |  | 2.50 |  | 440,829.60 |  | 34.19 |  | 0.1453 |  | 2,561,220 |  |
| 2013 | 86,842,549.02 |  | 40.00 |  | 2.50 |  | 2,171,063.73 |  | 34.79 |  | 0.1303 |  | 11,311,242 |  |
| 2014 | 47,369,385.96 |  | 40.00 |  | 2.50 |  | 1,184,234.65 |  | 35.40 |  | 0.1150 |  | 5,447,479 |  |
| 2015 | 142,981,175.34 |  | 40.00 |  | 2.50 |  | 3,574,529.38 |  | 36.00 |  | 0.1000 |  | 14,298,118 |  |
| 2016 | 174,779,401.95 |  | 40.00 |  | 2.50 |  | 4,369,485.05 |  | 36.61 |  | 0.0848 |  | 14,812,554 |  |
| 2017 | 186,107,588.53 |  | 40.00 |  | 2.50 |  | 4,652,689.71 |  | 37.22 |  | 0.0695 |  | 12,934,477 |  |
| 2018 | 204,815,284.08 |  | 40.00 |  | 2.50 |  | 5,120,382.10 |  | 37.84 |  | 0.0540 |  | 11,060,025 |  |
| 2019 | 228,351,726.01 |  | 40.00 |  | 2.50 |  | 5,708,793.15 |  | 38.45 |  | 0.0388 |  | 8,848,629 |  |
| 2020 | 237,650,653.39 |  | 40.00 |  | 2.50 |  | 5,941,266.33 |  | 39.07 |  | 0.0233 |  | 5,525,378 |  |
| 2021 | 313,240,507.66 |  | 40.00 |  | 2.50 |  | 7,831,012.69 |  | 39.69 |  | 0.0078 |  | 2,427,614 |  |
|  | | | | | | | | | | | | | | |
|  | 3,493,242,494.06 |  |  | | | | 87,330,771.62 |  |  | | | | 708,771,635 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.50 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 56-R1 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1918 | 7.42 |  | 56.00 |  | 1.79 |  | 0.13 |  | 3.02 |  | 0.9461 |  | 7 |  |
| 1919 | 27.82 |  | 56.00 |  | 1.79 |  | 0.50 |  | 3.33 |  | 0.9405 |  | 26 |  |
| 1920 | 29.22 |  | 56.00 |  | 1.79 |  | 0.52 |  | 3.64 |  | 0.9350 |  | 27 |  |
| 1921 | 41.75 |  | 56.00 |  | 1.79 |  | 0.75 |  | 3.94 |  | 0.9296 |  | 39 |  |
| 1922 | 38.97 |  | 56.00 |  | 1.79 |  | 0.70 |  | 4.24 |  | 0.9243 |  | 36 |  |
| 1923 | 41.76 |  | 56.00 |  | 1.79 |  | 0.75 |  | 4.54 |  | 0.9189 |  | 38 |  |
| 1924 | 31.33 |  | 56.00 |  | 1.79 |  | 0.56 |  | 4.83 |  | 0.9138 |  | 29 |  |
| 1925 | 79.08 |  | 56.00 |  | 1.79 |  | 1.42 |  | 5.13 |  | 0.9084 |  | 72 |  |
| 1926 | 196.81 |  | 56.00 |  | 1.79 |  | 3.52 |  | 5.43 |  | 0.9030 |  | 178 |  |
| 1927 | 537.08 |  | 56.00 |  | 1.79 |  | 9.61 |  | 5.73 |  | 0.8977 |  | 482 |  |
| 1928 | 537.92 |  | 56.00 |  | 1.79 |  | 9.63 |  | 6.03 |  | 0.8923 |  | 480 |  |
| 1929 | 588.03 |  | 56.00 |  | 1.79 |  | 10.53 |  | 6.34 |  | 0.8868 |  | 521 |  |
| 1930 | 584.45 |  | 56.00 |  | 1.79 |  | 10.46 |  | 6.65 |  | 0.8813 |  | 515 |  |
| 1931 | 925.35 |  | 56.00 |  | 1.79 |  | 16.56 |  | 6.96 |  | 0.8757 |  | 810 |  |
| 1932 | 850.34 |  | 56.00 |  | 1.79 |  | 15.22 |  | 7.28 |  | 0.8700 |  | 740 |  |
| 1933 | 743.48 |  | 56.00 |  | 1.79 |  | 13.31 |  | 7.60 |  | 0.8643 |  | 643 |  |
| 1934 | 991.86 |  | 56.00 |  | 1.79 |  | 17.75 |  | 7.93 |  | 0.8584 |  | 851 |  |
| 1935 | 1,324.16 |  | 56.00 |  | 1.79 |  | 23.70 |  | 8.25 |  | 0.8527 |  | 1,129 |  |
| 1936 | 2,702.52 |  | 56.00 |  | 1.79 |  | 48.38 |  | 8.59 |  | 0.8466 |  | 2,288 |  |
| 1937 | 3,141.65 |  | 56.00 |  | 1.79 |  | 56.24 |  | 8.93 |  | 0.8405 |  | 2,641 |  |
| 1938 | 2,866.85 |  | 56.00 |  | 1.79 |  | 51.32 |  | 9.27 |  | 0.8345 |  | 2,392 |  |
| 1939 | 2,579.68 |  | 56.00 |  | 1.79 |  | 46.18 |  | 9.61 |  | 0.8284 |  | 2,137 |  |
| 1940 | 2,604.04 |  | 56.00 |  | 1.79 |  | 46.61 |  | 9.96 |  | 0.8221 |  | 2,141 |  |
| 1941 | 61,391.57 |  | 56.00 |  | 1.79 |  | 1,098.91 |  | 10.32 |  | 0.8157 |  | 50,078 |  |
| 1942 | 14,242.11 |  | 56.00 |  | 1.79 |  | 254.93 |  | 10.68 |  | 0.8093 |  | 11,526 |  |
| 1943 | 5,774.13 |  | 56.00 |  | 1.79 |  | 103.36 |  | 11.04 |  | 0.8029 |  | 4,636 |  |
| 1944 | 6,040.01 |  | 56.00 |  | 1.79 |  | 108.12 |  | 11.41 |  | 0.7963 |  | 4,809 |  |
| 1945 | 15,867.03 |  | 56.00 |  | 1.79 |  | 284.02 |  | 11.78 |  | 0.7896 |  | 12,529 |  |
| 1946 | 34,888.00 |  | 56.00 |  | 1.79 |  | 624.50 |  | 12.16 |  | 0.7829 |  | 27,312 |  |
| 1947 | 81,124.10 |  | 56.00 |  | 1.79 |  | 1,452.12 |  | 12.54 |  | 0.7761 |  | 62,958 |  |
| 1948 | 103,822.43 |  | 56.00 |  | 1.79 |  | 1,858.42 |  | 12.93 |  | 0.7691 |  | 79,851 |  |
| 1949 | 233,461.39 |  | 56.00 |  | 1.79 |  | 4,178.96 |  | 13.32 |  | 0.7621 |  | 177,930 |  |
| 1950 | 249,678.41 |  | 56.00 |  | 1.79 |  | 4,469.24 |  | 13.72 |  | 0.7550 |  | 188,507 |  |
| 1951 | 249,999.88 |  | 56.00 |  | 1.79 |  | 4,475.00 |  | 14.12 |  | 0.7479 |  | 186,965 |  |
| 1952 | 333,417.76 |  | 56.00 |  | 1.79 |  | 5,968.18 |  | 14.53 |  | 0.7405 |  | 246,909 |  |
| 1953 | 317,125.77 |  | 56.00 |  | 1.79 |  | 5,676.55 |  | 14.94 |  | 0.7332 |  | 232,520 |  |
| 1954 | 334,183.03 |  | 56.00 |  | 1.79 |  | 5,981.88 |  | 15.36 |  | 0.7257 |  | 242,520 |  |
| 1955 | 434,139.76 |  | 56.00 |  | 1.79 |  | 7,771.10 |  | 15.78 |  | 0.7182 |  | 311,804 |  |
| 1956 | 475,472.49 |  | 56.00 |  | 1.79 |  | 8,510.96 |  | 16.21 |  | 0.7105 |  | 337,842 |  |
| 1957 | 544,090.46 |  | 56.00 |  | 1.79 |  | 9,739.22 |  | 16.65 |  | 0.7027 |  | 382,321 |  |
| 1958 | 550,562.23 |  | 56.00 |  | 1.79 |  | 9,855.06 |  | 17.09 |  | 0.6948 |  | 382,542 |  |
| 1959 | 531,307.40 |  | 56.00 |  | 1.79 |  | 9,510.40 |  | 17.53 |  | 0.6870 |  | 364,987 |  |
| 1960 | 503,155.23 |  | 56.00 |  | 1.79 |  | 9,006.48 |  | 17.98 |  | 0.6789 |  | 341,607 |  |
| 1961 | 507,495.48 |  | 56.00 |  | 1.79 |  | 9,084.17 |  | 18.44 |  | 0.6707 |  | 340,382 |  |
| 1962 | 539,306.69 |  | 56.00 |  | 1.79 |  | 9,653.59 |  | 18.90 |  | 0.6625 |  | 357,291 |  |
| 1963 | 537,624.18 |  | 56.00 |  | 1.79 |  | 9,623.47 |  | 19.37 |  | 0.6541 |  | 351,665 |  |
| 1964 | 535,265.33 |  | 56.00 |  | 1.79 |  | 9,581.25 |  | 19.84 |  | 0.6457 |  | 345,626 |  |
| 1965 | 553,799.75 |  | 56.00 |  | 1.79 |  | 9,913.02 |  | 20.32 |  | 0.6371 |  | 352,848 |  |
| 1966 | 599,757.40 |  | 56.00 |  | 1.79 |  | 10,735.66 |  | 20.81 |  | 0.6284 |  | 376,882 |  |
| 1967 | 725,559.61 |  | 56.00 |  | 1.79 |  | 12,987.52 |  | 21.30 |  | 0.6196 |  | 449,586 |  |
| 1968 | 888,970.95 |  | 56.00 |  | 1.79 |  | 15,912.58 |  | 21.80 |  | 0.6107 |  | 542,903 |  |
| 1969 | 980,852.61 |  | 56.00 |  | 1.79 |  | 17,557.26 |  | 22.30 |  | 0.6018 |  | 590,267 |  |
| 1970 | 1,180,575.61 |  | 56.00 |  | 1.79 |  | 21,132.30 |  | 22.82 |  | 0.5925 |  | 699,491 |  |
| 1971 | 1,256,071.82 |  | 56.00 |  | 1.79 |  | 22,483.69 |  | 23.33 |  | 0.5834 |  | 732,780 |  |
| 1972 | 1,636,620.42 |  | 56.00 |  | 1.79 |  | 29,295.51 |  | 23.86 |  | 0.5739 |  | 939,306 |  |
| 1973 | 1,565,293.62 |  | 56.00 |  | 1.79 |  | 28,018.76 |  | 24.38 |  | 0.5646 |  | 883,827 |  |
| 1974 | 1,434,979.64 |  | 56.00 |  | 1.79 |  | 25,686.14 |  | 24.92 |  | 0.5550 |  | 796,414 |  |
| 1975 | 1,337,222.73 |  | 56.00 |  | 1.79 |  | 23,936.29 |  | 25.46 |  | 0.5454 |  | 729,268 |  |
| 1976 | 1,186,308.22 |  | 56.00 |  | 1.79 |  | 21,234.92 |  | 26.01 |  | 0.5355 |  | 635,316 |  |
| 1977 | 1,847,896.99 |  | 56.00 |  | 1.79 |  | 33,077.36 |  | 26.56 |  | 0.5257 |  | 971,458 |  |
| 1978 | 2,207,025.59 |  | 56.00 |  | 1.79 |  | 39,505.76 |  | 27.12 |  | 0.5157 |  | 1,138,185 |  |
| 1979 | 3,144,869.85 |  | 56.00 |  | 1.79 |  | 56,293.17 |  | 27.69 |  | 0.5055 |  | 1,589,858 |  |
| 1980 | 3,386,962.58 |  | 56.00 |  | 1.79 |  | 60,626.63 |  | 28.26 |  | 0.4954 |  | 1,677,766 |  |
| 1981 | 3,342,316.43 |  | 56.00 |  | 1.79 |  | 59,827.46 |  | 28.84 |  | 0.4850 |  | 1,621,023 |  |
| 1982 | 2,688,315.38 |  | 56.00 |  | 1.79 |  | 48,120.85 |  | 29.43 |  | 0.4745 |  | 1,275,498 |  |
| 1983 | 3,284,864.66 |  | 56.00 |  | 1.79 |  | 58,799.08 |  | 30.02 |  | 0.4639 |  | 1,523,947 |  |
| 1984 | 4,708,584.84 |  | 56.00 |  | 1.79 |  | 84,283.67 |  | 30.61 |  | 0.4534 |  | 2,134,825 |  |
| 1985 | 5,123,458.96 |  | 56.00 |  | 1.79 |  | 91,709.92 |  | 31.22 |  | 0.4425 |  | 2,267,131 |  |
| 1986 | 5,723,556.11 |  | 56.00 |  | 1.79 |  | 102,451.65 |  | 31.82 |  | 0.4318 |  | 2,471,374 |  |
| 1987 | 5,350,170.72 |  | 56.00 |  | 1.79 |  | 95,768.06 |  | 32.44 |  | 0.4207 |  | 2,250,870 |  |
| 1988 | 5,068,098.41 |  | 56.00 |  | 1.79 |  | 90,718.96 |  | 33.06 |  | 0.4096 |  | 2,076,096 |  |
| 1989 | 6,315,214.91 |  | 56.00 |  | 1.79 |  | 113,042.35 |  | 33.68 |  | 0.3986 |  | 2,517,055 |  |
| 1990 | 6,343,002.86 |  | 56.00 |  | 1.79 |  | 113,539.75 |  | 34.31 |  | 0.3873 |  | 2,456,772 |  |
| 1991 | 6,264,541.90 |  | 56.00 |  | 1.79 |  | 112,135.30 |  | 34.94 |  | 0.3761 |  | 2,355,906 |  |
| 1992 | 4,503,282.63 |  | 56.00 |  | 1.79 |  | 80,608.76 |  | 35.58 |  | 0.3646 |  | 1,642,077 |  |
| 1993 | 5,282,757.12 |  | 56.00 |  | 1.79 |  | 94,561.35 |  | 36.23 |  | 0.3530 |  | 1,865,025 |  |
| 1994 | 5,778,212.68 |  | 56.00 |  | 1.79 |  | 103,430.01 |  | 36.87 |  | 0.3416 |  | 1,973,895 |  |
| 1995 | 4,941,187.22 |  | 56.00 |  | 1.79 |  | 88,447.25 |  | 37.53 |  | 0.3298 |  | 1,629,702 |  |
| 1996 | 4,563,583.04 |  | 56.00 |  | 1.79 |  | 81,688.14 |  | 38.18 |  | 0.3182 |  | 1,452,178 |  |
| 1997 | 4,517,995.99 |  | 56.00 |  | 1.79 |  | 80,872.13 |  | 38.84 |  | 0.3064 |  | 1,384,450 |  |
| 1998 | 5,240,864.79 |  | 56.00 |  | 1.79 |  | 93,811.48 |  | 39.51 |  | 0.2945 |  | 1,543,225 |  |
| 1999 | 4,658,754.29 |  | 56.00 |  | 1.79 |  | 83,391.70 |  | 40.17 |  | 0.2827 |  | 1,316,937 |  |
| 2000 | 5,587,272.19 |  | 56.00 |  | 1.79 |  | 100,012.17 |  | 40.84 |  | 0.2707 |  | 1,512,530 |  |
| 2001 | 5,465,604.61 |  | 56.00 |  | 1.79 |  | 97,834.32 |  | 41.52 |  | 0.2586 |  | 1,413,241 |  |
| 2002 | 6,803,907.11 |  | 56.00 |  | 1.79 |  | 121,789.94 |  | 42.20 |  | 0.2464 |  | 1,676,687 |  |
| 2003 | 7,773,702.86 |  | 56.00 |  | 1.79 |  | 139,149.28 |  | 42.87 |  | 0.2345 |  | 1,822,622 |  |
| 2004 | 8,059,997.54 |  | 56.00 |  | 1.79 |  | 144,273.96 |  | 43.56 |  | 0.2221 |  | 1,790,448 |  |
| 2005 | 16,513,754.79 |  | 56.00 |  | 1.79 |  | 295,596.21 |  | 44.24 |  | 0.2100 |  | 3,467,889 |  |
| 2006 | 12,532,197.04 |  | 56.00 |  | 1.79 |  | 224,326.33 |  | 44.93 |  | 0.1977 |  | 2,477,365 |  |
| 2007 | 17,956,465.56 |  | 56.00 |  | 1.79 |  | 321,420.73 |  | 45.62 |  | 0.1854 |  | 3,328,410 |  |
| 2008 | 3,833,855.05 |  | 56.00 |  | 1.79 |  | 68,626.01 |  | 46.31 |  | 0.1730 |  | 663,410 |  |
| 2009 | 8,995,609.74 |  | 56.00 |  | 1.79 |  | 161,021.41 |  | 47.01 |  | 0.1605 |  | 1,444,155 |  |
| 2010 | 8,876,673.64 |  | 56.00 |  | 1.79 |  | 158,892.46 |  | 47.71 |  | 0.1480 |  | 1,314,103 |  |
| 2011 | 9,167,079.35 |  | 56.00 |  | 1.79 |  | 164,090.72 |  | 48.41 |  | 0.1355 |  | 1,242,506 |  |
| 2012 | 10,130,813.76 |  | 56.00 |  | 1.79 |  | 181,341.57 |  | 49.11 |  | 0.1230 |  | 1,246,495 |  |
| 2013 | 11,872,634.41 |  | 56.00 |  | 1.79 |  | 212,520.16 |  | 49.82 |  | 0.1104 |  | 1,310,264 |  |
| 2014 | 16,190,008.50 |  | 56.00 |  | 1.79 |  | 289,801.15 |  | 50.54 |  | 0.0975 |  | 1,578,526 |  |
| 2015 | 13,860,547.17 |  | 56.00 |  | 1.79 |  | 248,103.79 |  | 51.25 |  | 0.0848 |  | 1,175,652 |  |
| 2016 | 15,673,238.33 |  | 56.00 |  | 1.79 |  | 280,550.97 |  | 51.97 |  | 0.0720 |  | 1,127,846 |  |
| 2017 | 14,741,399.02 |  | 56.00 |  | 1.79 |  | 263,871.04 |  | 52.70 |  | 0.0589 |  | 868,711 |  |
| 2018 | 21,782,228.84 |  | 56.00 |  | 1.79 |  | 389,901.90 |  | 53.42 |  | 0.0461 |  | 1,003,507 |  |
| 2019 | 18,851,947.82 |  | 56.00 |  | 1.79 |  | 337,449.87 |  | 54.15 |  | 0.0330 |  | 622,868 |  |
| 2020 | 24,655,889.93 |  | 56.00 |  | 1.79 |  | 441,340.43 |  | 54.89 |  | 0.0198 |  | 488,680 |  |
| 2021 | 35,192,463.15 |  | 56.00 |  | 1.79 |  | 629,945.09 |  | 55.63 |  | 0.0066 |  | 232,622 |  |
|  | | | | | | | | | | | | | | |
|  | 419,369,727.18 |  |  | | | | 7,506,718.19 |  |  | | | | 85,736,017 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.79 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 55-R2 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1959 | 130.00 |  | 55.00 |  | 1.82 |  | 2.37 |  | 11.95 |  | 0.7827 |  | 102 |  |
| 1960 | 132.72 |  | 55.00 |  | 1.82 |  | 2.42 |  | 12.35 |  | 0.7755 |  | 103 |  |
| 1961 | 68.02 |  | 55.00 |  | 1.82 |  | 1.24 |  | 12.76 |  | 0.7680 |  | 52 |  |
| 1962 | 71.30 |  | 55.00 |  | 1.82 |  | 1.30 |  | 13.18 |  | 0.7604 |  | 54 |  |
| 1963 | 72.97 |  | 55.00 |  | 1.82 |  | 1.33 |  | 13.62 |  | 0.7524 |  | 55 |  |
| 1964 | 228.76 |  | 55.00 |  | 1.82 |  | 4.16 |  | 14.06 |  | 0.7444 |  | 170 |  |
| 1965 | 324.67 |  | 55.00 |  | 1.82 |  | 5.91 |  | 14.51 |  | 0.7362 |  | 239 |  |
| 1966 | 32,514.51 |  | 55.00 |  | 1.82 |  | 591.76 |  | 14.98 |  | 0.7276 |  | 23,659 |  |
| 1967 | 222,363.61 |  | 55.00 |  | 1.82 |  | 4,047.02 |  | 15.45 |  | 0.7191 |  | 159,899 |  |
| 1968 | 364,382.85 |  | 55.00 |  | 1.82 |  | 6,631.77 |  | 15.94 |  | 0.7102 |  | 258,777 |  |
| 1969 | 210,701.09 |  | 55.00 |  | 1.82 |  | 3,834.76 |  | 16.44 |  | 0.7011 |  | 147,720 |  |
| 1970 | 584,141.69 |  | 55.00 |  | 1.82 |  | 10,631.38 |  | 16.95 |  | 0.6918 |  | 404,121 |  |
| 1971 | 614,822.98 |  | 55.00 |  | 1.82 |  | 11,189.78 |  | 17.47 |  | 0.6824 |  | 419,531 |  |
| 1972 | 1,390,808.70 |  | 55.00 |  | 1.82 |  | 25,312.72 |  | 17.99 |  | 0.6729 |  | 935,889 |  |
| 1973 | 2,726,801.36 |  | 55.00 |  | 1.82 |  | 49,627.78 |  | 18.54 |  | 0.6629 |  | 1,807,624 |  |
| 1974 | 2,543,038.43 |  | 55.00 |  | 1.82 |  | 46,283.30 |  | 19.09 |  | 0.6529 |  | 1,660,375 |  |
| 1975 | 2,290,120.71 |  | 55.00 |  | 1.82 |  | 41,680.20 |  | 19.65 |  | 0.6427 |  | 1,471,929 |  |
| 1976 | 1,888,508.11 |  | 55.00 |  | 1.82 |  | 34,370.85 |  | 20.22 |  | 0.6324 |  | 1,194,217 |  |
| 1977 | 2,779,676.00 |  | 55.00 |  | 1.82 |  | 50,590.10 |  | 20.80 |  | 0.6218 |  | 1,728,458 |  |
| 1978 | 4,686,831.63 |  | 55.00 |  | 1.82 |  | 85,300.34 |  | 21.40 |  | 0.6109 |  | 2,863,232 |  |
| 1979 | 11,733,887.46 |  | 55.00 |  | 1.82 |  | 213,556.75 |  | 22.00 |  | 0.6000 |  | 7,040,332 |  |
| 1980 | 15,618,153.99 |  | 55.00 |  | 1.82 |  | 284,250.40 |  | 22.61 |  | 0.5889 |  | 9,197,687 |  |
| 1981 | 9,167,068.78 |  | 55.00 |  | 1.82 |  | 166,840.65 |  | 23.23 |  | 0.5776 |  | 5,295,266 |  |
| 1982 | 4,462,150.22 |  | 55.00 |  | 1.82 |  | 81,211.13 |  | 23.87 |  | 0.5660 |  | 2,525,577 |  |
| 1983 | 9,633,011.19 |  | 55.00 |  | 1.82 |  | 175,320.80 |  | 24.51 |  | 0.5544 |  | 5,340,156 |  |
| 1984 | 13,312,317.37 |  | 55.00 |  | 1.82 |  | 242,284.18 |  | 25.16 |  | 0.5426 |  | 7,222,598 |  |
| 1985 | 12,001,259.02 |  | 55.00 |  | 1.82 |  | 218,422.91 |  | 25.82 |  | 0.5306 |  | 6,367,268 |  |
| 1986 | 10,765,930.65 |  | 55.00 |  | 1.82 |  | 195,939.94 |  | 26.49 |  | 0.5184 |  | 5,580,628 |  |
| 1987 | 12,157,798.58 |  | 55.00 |  | 1.82 |  | 221,271.93 |  | 27.17 |  | 0.5060 |  | 6,151,846 |  |
| 1988 | 15,774,339.29 |  | 55.00 |  | 1.82 |  | 287,092.98 |  | 27.85 |  | 0.4936 |  | 7,786,845 |  |
| 1989 | 19,418,102.96 |  | 55.00 |  | 1.82 |  | 353,409.47 |  | 28.55 |  | 0.4809 |  | 9,338,360 |  |
| 1990 | 18,168,187.87 |  | 55.00 |  | 1.82 |  | 330,661.02 |  | 29.25 |  | 0.4682 |  | 8,505,982 |  |
| 1991 | 15,168,649.43 |  | 55.00 |  | 1.82 |  | 276,069.42 |  | 29.96 |  | 0.4553 |  | 6,905,831 |  |
| 1992 | 14,733,188.25 |  | 55.00 |  | 1.82 |  | 268,144.03 |  | 30.68 |  | 0.4422 |  | 6,514,721 |  |
| 1993 | 17,731,193.77 |  | 55.00 |  | 1.82 |  | 322,707.73 |  | 31.41 |  | 0.4289 |  | 7,605,086 |  |
| 1994 | 20,757,108.42 |  | 55.00 |  | 1.82 |  | 377,779.37 |  | 32.15 |  | 0.4155 |  | 8,623,541 |  |
| 1995 | 21,116,869.04 |  | 55.00 |  | 1.82 |  | 384,327.02 |  | 32.89 |  | 0.4020 |  | 8,488,981 |  |
| 1996 | 20,466,517.34 |  | 55.00 |  | 1.82 |  | 372,490.62 |  | 33.64 |  | 0.3884 |  | 7,948,377 |  |
| 1997 | 19,961,701.57 |  | 55.00 |  | 1.82 |  | 363,302.97 |  | 34.40 |  | 0.3746 |  | 7,476,655 |  |
| 1998 | 21,299,120.20 |  | 55.00 |  | 1.82 |  | 387,643.99 |  | 35.17 |  | 0.3606 |  | 7,679,398 |  |
| 1999 | 22,594,427.66 |  | 55.00 |  | 1.82 |  | 411,218.58 |  | 35.94 |  | 0.3466 |  | 7,830,099 |  |
| 2000 | 29,551,156.40 |  | 55.00 |  | 1.82 |  | 537,831.05 |  | 36.72 |  | 0.3324 |  | 9,821,622 |  |
| 2001 | 28,929,680.02 |  | 55.00 |  | 1.82 |  | 526,520.18 |  | 37.51 |  | 0.3180 |  | 9,199,638 |  |
| 2002 | 32,132,631.90 |  | 55.00 |  | 1.82 |  | 584,813.90 |  | 38.31 |  | 0.3035 |  | 9,750,647 |  |
| 2003 | 24,097,291.70 |  | 55.00 |  | 1.82 |  | 438,570.71 |  | 39.11 |  | 0.2889 |  | 6,961,949 |  |
| 2004 | 28,722,415.74 |  | 55.00 |  | 1.82 |  | 522,747.97 |  | 39.92 |  | 0.2742 |  | 7,875,112 |  |
| 2005 | 27,743,887.90 |  | 55.00 |  | 1.82 |  | 504,938.76 |  | 40.73 |  | 0.2595 |  | 7,198,152 |  |
| 2006 | 40,588,367.49 |  | 55.00 |  | 1.82 |  | 738,708.29 |  | 41.55 |  | 0.2446 |  | 9,925,885 |  |
| 2007 | 41,692,714.19 |  | 55.00 |  | 1.82 |  | 758,807.40 |  | 42.38 |  | 0.2295 |  | 9,566,393 |  |
| 2008 | 9,009,782.53 |  | 55.00 |  | 1.82 |  | 163,978.04 |  | 43.21 |  | 0.2144 |  | 1,931,337 |  |
| 2009 | 19,849,653.66 |  | 55.00 |  | 1.82 |  | 361,263.70 |  | 44.05 |  | 0.1991 |  | 3,951,868 |  |
| 2010 | 19,167,672.79 |  | 55.00 |  | 1.82 |  | 348,851.64 |  | 44.89 |  | 0.1838 |  | 3,523,402 |  |
| 2011 | 25,021,951.27 |  | 55.00 |  | 1.82 |  | 455,399.51 |  | 45.75 |  | 0.1682 |  | 4,208,192 |  |
| 2012 | 33,879,175.20 |  | 55.00 |  | 1.82 |  | 616,600.99 |  | 46.60 |  | 0.1527 |  | 5,174,366 |  |
| 2013 | 39,775,846.63 |  | 55.00 |  | 1.82 |  | 723,920.41 |  | 47.46 |  | 0.1371 |  | 5,452,871 |  |
| 2014 | 75,376,730.79 |  | 55.00 |  | 1.82 |  | 1,371,856.50 |  | 48.33 |  | 0.1213 |  | 9,140,936 |  |
| 2015 | 49,138,695.16 |  | 55.00 |  | 1.82 |  | 894,324.25 |  | 49.20 |  | 0.1055 |  | 5,181,675 |  |
| 2016 | 59,184,444.59 |  | 55.00 |  | 1.82 |  | 1,077,156.89 |  | 50.08 |  | 0.0895 |  | 5,294,049 |  |
| 2017 | 62,078,397.17 |  | 55.00 |  | 1.82 |  | 1,129,826.83 |  | 50.97 |  | 0.0733 |  | 4,548,484 |  |
| 2018 | 74,635,112.96 |  | 55.00 |  | 1.82 |  | 1,358,359.06 |  | 51.85 |  | 0.0573 |  | 4,274,353 |  |
| 2019 | 82,889,018.17 |  | 55.00 |  | 1.82 |  | 1,508,580.13 |  | 52.75 |  | 0.0409 |  | 3,390,990 |  |
| 2020 | 103,796,148.55 |  | 55.00 |  | 1.82 |  | 1,889,089.90 |  | 53.65 |  | 0.0246 |  | 2,548,195 |  |
| 2021 | 111,382,745.55 |  | 55.00 |  | 1.82 |  | 2,027,165.97 |  | 54.55 |  | 0.0082 |  | 911,111 |  |
|  | | | | | | | | | | | | | | |
|  | 1,365,020,243.53 |  |  | | | | 24,843,368.46 |  |  | | | | 292,332,667 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.82 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 40-R2 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1956 | 3,414.08 |  | 40.00 |  | 2.50 |  | 85.35 |  | 2.35 |  | 0.9413 |  | 3,214 |  |
| 1957 | 10,021.29 |  | 40.00 |  | 2.50 |  | 250.53 |  | 2.63 |  | 0.9343 |  | 9,362 |  |
| 1958 | 11,882.35 |  | 40.00 |  | 2.50 |  | 297.06 |  | 2.92 |  | 0.9270 |  | 11,015 |  |
| 1959 | 20,284.40 |  | 40.00 |  | 2.50 |  | 507.11 |  | 3.21 |  | 0.9198 |  | 18,657 |  |
| 1960 | 21,756.08 |  | 40.00 |  | 2.50 |  | 543.90 |  | 3.50 |  | 0.9125 |  | 19,852 |  |
| 1961 | 22,228.32 |  | 40.00 |  | 2.50 |  | 555.71 |  | 3.79 |  | 0.9053 |  | 20,122 |  |
| 1962 | 22,173.73 |  | 40.00 |  | 2.50 |  | 554.34 |  | 4.08 |  | 0.8980 |  | 19,912 |  |
| 1963 | 22,976.02 |  | 40.00 |  | 2.50 |  | 574.40 |  | 4.37 |  | 0.8908 |  | 20,466 |  |
| 1964 | 31,004.04 |  | 40.00 |  | 2.50 |  | 775.10 |  | 4.67 |  | 0.8833 |  | 27,384 |  |
| 1965 | 34,084.34 |  | 40.00 |  | 2.50 |  | 852.11 |  | 4.96 |  | 0.8760 |  | 29,858 |  |
| 1966 | 28,156.10 |  | 40.00 |  | 2.50 |  | 703.90 |  | 5.26 |  | 0.8685 |  | 24,454 |  |
| 1967 | 37,498.38 |  | 40.00 |  | 2.50 |  | 937.46 |  | 5.56 |  | 0.8610 |  | 32,286 |  |
| 1968 | 35,338.86 |  | 40.00 |  | 2.50 |  | 883.47 |  | 5.87 |  | 0.8533 |  | 30,153 |  |
| 1969 | 545,722.25 |  | 40.00 |  | 2.50 |  | 13,643.06 |  | 6.19 |  | 0.8453 |  | 461,272 |  |
| 1970 | 1,025,376.20 |  | 40.00 |  | 2.50 |  | 25,634.40 |  | 6.51 |  | 0.8373 |  | 858,496 |  |
| 1971 | 571,232.87 |  | 40.00 |  | 2.50 |  | 14,280.82 |  | 6.84 |  | 0.8290 |  | 473,552 |  |
| 1972 | 1,797,924.80 |  | 40.00 |  | 2.50 |  | 44,948.12 |  | 7.19 |  | 0.8203 |  | 1,474,748 |  |
| 1973 | 1,991,947.89 |  | 40.00 |  | 2.50 |  | 49,798.70 |  | 7.54 |  | 0.8115 |  | 1,616,466 |  |
| 1974 | 2,565,166.63 |  | 40.00 |  | 2.50 |  | 64,129.17 |  | 7.90 |  | 0.8025 |  | 2,058,546 |  |
| 1975 | 1,549,528.05 |  | 40.00 |  | 2.50 |  | 38,738.20 |  | 8.28 |  | 0.7930 |  | 1,228,776 |  |
| 1976 | 1,609,941.31 |  | 40.00 |  | 2.50 |  | 40,248.53 |  | 8.67 |  | 0.7833 |  | 1,260,987 |  |
| 1977 | 2,805,212.29 |  | 40.00 |  | 2.50 |  | 70,130.31 |  | 9.07 |  | 0.7733 |  | 2,169,130 |  |
| 1978 | 3,854,950.01 |  | 40.00 |  | 2.50 |  | 96,373.75 |  | 9.49 |  | 0.7628 |  | 2,940,363 |  |
| 1979 | 3,867,174.10 |  | 40.00 |  | 2.50 |  | 96,679.35 |  | 9.92 |  | 0.7520 |  | 2,908,115 |  |
| 1980 | 4,367,053.90 |  | 40.00 |  | 2.50 |  | 109,176.35 |  | 10.37 |  | 0.7408 |  | 3,234,895 |  |
| 1981 | 3,714,451.60 |  | 40.00 |  | 2.50 |  | 92,861.29 |  | 10.83 |  | 0.7293 |  | 2,708,764 |  |
| 1982 | 3,156,358.54 |  | 40.00 |  | 2.50 |  | 78,908.96 |  | 11.31 |  | 0.7173 |  | 2,263,898 |  |
| 1983 | 4,785,456.08 |  | 40.00 |  | 2.50 |  | 119,636.40 |  | 11.80 |  | 0.7050 |  | 3,373,747 |  |
| 1984 | 5,815,950.48 |  | 40.00 |  | 2.50 |  | 145,398.76 |  | 12.30 |  | 0.6925 |  | 4,027,546 |  |
| 1985 | 5,306,108.37 |  | 40.00 |  | 2.50 |  | 132,652.71 |  | 12.82 |  | 0.6795 |  | 3,605,501 |  |
| 1986 | 6,574,678.27 |  | 40.00 |  | 2.50 |  | 164,366.96 |  | 13.36 |  | 0.6660 |  | 4,378,736 |  |
| 1987 | 5,557,600.58 |  | 40.00 |  | 2.50 |  | 138,940.01 |  | 13.91 |  | 0.6523 |  | 3,624,945 |  |
| 1988 | 4,277,561.98 |  | 40.00 |  | 2.50 |  | 106,939.05 |  | 14.47 |  | 0.6383 |  | 2,730,154 |  |
| 1989 | 1,055,250.22 |  | 40.00 |  | 2.50 |  | 26,381.26 |  | 15.05 |  | 0.6238 |  | 658,212 |  |
| 1990 | 1,437,910.55 |  | 40.00 |  | 2.50 |  | 35,947.76 |  | 15.64 |  | 0.6090 |  | 875,688 |  |
| 1991 | 736,607.07 |  | 40.00 |  | 2.50 |  | 18,415.18 |  | 16.25 |  | 0.5938 |  | 437,360 |  |
| 1992 | 904,068.16 |  | 40.00 |  | 2.50 |  | 22,601.70 |  | 16.87 |  | 0.5783 |  | 522,777 |  |
| 1993 | 977,110.28 |  | 40.00 |  | 2.50 |  | 24,427.76 |  | 17.50 |  | 0.5625 |  | 549,625 |  |
| 1994 | 1,199,154.01 |  | 40.00 |  | 2.50 |  | 29,978.85 |  | 18.15 |  | 0.5463 |  | 655,038 |  |
| 1995 | 1,122,796.72 |  | 40.00 |  | 2.50 |  | 28,069.92 |  | 18.81 |  | 0.5298 |  | 594,802 |  |
| 1996 | 1,058,603.17 |  | 40.00 |  | 2.50 |  | 26,465.08 |  | 19.48 |  | 0.5130 |  | 543,063 |  |
| 1997 | 959,282.44 |  | 40.00 |  | 2.50 |  | 23,982.06 |  | 20.16 |  | 0.4960 |  | 475,804 |  |
| 1998 | 1,264,606.26 |  | 40.00 |  | 2.50 |  | 31,615.16 |  | 20.86 |  | 0.4785 |  | 605,114 |  |
| 1999 | 1,558,939.97 |  | 40.00 |  | 2.50 |  | 38,973.50 |  | 21.56 |  | 0.4610 |  | 718,671 |  |
| 2000 | 2,056,445.55 |  | 40.00 |  | 2.50 |  | 51,411.14 |  | 22.28 |  | 0.4430 |  | 911,005 |  |
| 2001 | 1,692,920.35 |  | 40.00 |  | 2.50 |  | 42,323.01 |  | 23.01 |  | 0.4248 |  | 719,068 |  |
| 2002 | 1,114,380.15 |  | 40.00 |  | 2.50 |  | 27,859.50 |  | 23.75 |  | 0.4063 |  | 452,717 |  |
| 2003 | 980,675.19 |  | 40.00 |  | 2.50 |  | 24,516.88 |  | 24.50 |  | 0.3875 |  | 380,012 |  |
| 2004 | 1,317,103.79 |  | 40.00 |  | 2.50 |  | 32,927.59 |  | 25.26 |  | 0.3685 |  | 485,353 |  |
| 2005 | 2,786,908.64 |  | 40.00 |  | 2.50 |  | 69,672.72 |  | 26.03 |  | 0.3493 |  | 973,328 |  |
| 2006 | 1,887,283.20 |  | 40.00 |  | 2.50 |  | 47,182.08 |  | 26.82 |  | 0.3295 |  | 621,860 |  |
| 2007 | 1,756,927.75 |  | 40.00 |  | 2.50 |  | 43,923.19 |  | 27.61 |  | 0.3098 |  | 544,208 |  |
| 2008 | 1,985,162.68 |  | 40.00 |  | 2.50 |  | 49,629.07 |  | 28.41 |  | 0.2898 |  | 575,201 |  |
| 2009 | 3,403,857.86 |  | 40.00 |  | 2.50 |  | 85,096.45 |  | 29.21 |  | 0.2698 |  | 918,191 |  |
| 2010 | 2,354,150.10 |  | 40.00 |  | 2.50 |  | 58,853.75 |  | 30.03 |  | 0.2493 |  | 586,772 |  |
| 2011 | 7,629,672.32 |  | 40.00 |  | 2.50 |  | 190,741.81 |  | 30.86 |  | 0.2285 |  | 1,743,380 |  |
| 2012 | 647,816.93 |  | 40.00 |  | 2.50 |  | 16,195.42 |  | 31.69 |  | 0.2078 |  | 134,584 |  |
| 2013 | 3,319,907.95 |  | 40.00 |  | 2.50 |  | 82,997.70 |  | 32.54 |  | 0.1865 |  | 619,163 |  |
| 2014 | 4,600,824.46 |  | 40.00 |  | 2.50 |  | 115,020.61 |  | 33.39 |  | 0.1653 |  | 760,286 |  |
| 2015 | 4,675,768.77 |  | 40.00 |  | 2.50 |  | 116,894.22 |  | 34.24 |  | 0.1440 |  | 673,311 |  |
| 2016 | 4,749,655.00 |  | 40.00 |  | 2.50 |  | 118,741.38 |  | 35.11 |  | 0.1223 |  | 580,645 |  |
| 2017 | 4,014,418.71 |  | 40.00 |  | 2.50 |  | 100,360.47 |  | 35.98 |  | 0.1005 |  | 403,449 |  |
| 2018 | 5,052,390.81 |  | 40.00 |  | 2.50 |  | 126,309.77 |  | 36.87 |  | 0.0783 |  | 395,350 |  |
| 2019 | 4,128,079.10 |  | 40.00 |  | 2.50 |  | 103,201.98 |  | 37.75 |  | 0.0563 |  | 232,204 |  |
| 2020 | 7,945,848.69 |  | 40.00 |  | 2.50 |  | 198,646.22 |  | 38.65 |  | 0.0338 |  | 268,172 |  |
| 2021 | 11,850,427.61 |  | 40.00 |  | 2.50 |  | 296,260.69 |  | 39.55 |  | 0.0113 |  | 133,317 |  |
|  | | | | | | | | | | | | | | |
|  | 158,265,168.65 |  |  | | | | 3,956,629.22 |  |  | | | | 67,413,102 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 2.50 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 20-R2.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 2003 | 18,656.93 |  | 20.00 |  | 5.00 |  | 932.85 |  | 5.52 |  | 0.7240 |  | 13,508 |  |
| 2004 | 2,145,018.93 |  | 20.00 |  | 5.00 |  | 107,250.95 |  | 6.06 |  | 0.6970 |  | 1,495,078 |  |
| 2007 | 521.53 |  | 20.00 |  | 5.00 |  | 26.08 |  | 7.92 |  | 0.6040 |  | 315 |  |
| 2008 | 2,938,269.91 |  | 20.00 |  | 5.00 |  | 146,913.50 |  | 8.60 |  | 0.5700 |  | 1,674,814 |  |
| 2009 | 123,584,625.24 |  | 20.00 |  | 5.00 |  | 6,179,231.26 |  | 9.32 |  | 0.5340 |  | 65,994,190 |  |
| 2010 | 1,531,826.96 |  | 20.00 |  | 5.00 |  | 76,591.35 |  | 10.06 |  | 0.4970 |  | 761,318 |  |
| 2011 | 329,227,853.81 |  | 20.00 |  | 5.00 |  | 16,461,392.69 |  | 10.82 |  | 0.4590 |  | 151,115,585 |  |
| 2012 | 81,237,280.56 |  | 20.00 |  | 5.00 |  | 4,061,864.03 |  | 11.61 |  | 0.4195 |  | 34,079,039 |  |
| 2013 | 18,709,742.41 |  | 20.00 |  | 5.00 |  | 935,487.12 |  | 12.42 |  | 0.3790 |  | 7,090,992 |  |
| 2014 | 42,591,078.76 |  | 20.00 |  | 5.00 |  | 2,129,553.94 |  | 13.25 |  | 0.3375 |  | 14,374,489 |  |
| 2015 | 69,491,026.41 |  | 20.00 |  | 5.00 |  | 3,474,551.32 |  | 14.10 |  | 0.2950 |  | 20,499,853 |  |
| 2016 | 8,201,977.18 |  | 20.00 |  | 5.00 |  | 410,098.86 |  | 14.97 |  | 0.2515 |  | 2,062,797 |  |
| 2017 | 5,904,802.11 |  | 20.00 |  | 5.00 |  | 295,240.11 |  | 15.85 |  | 0.2075 |  | 1,225,246 |  |
| 2018 | 6,406,133.10 |  | 20.00 |  | 5.00 |  | 320,306.66 |  | 16.75 |  | 0.1625 |  | 1,040,997 |  |
| 2019 | 31,969,703.41 |  | 20.00 |  | 5.00 |  | 1,598,485.17 |  | 17.67 |  | 0.1165 |  | 3,724,470 |  |
| 2020 | 49,871,729.95 |  | 20.00 |  | 5.00 |  | 2,493,586.50 |  | 18.59 |  | 0.0705 |  | 3,515,957 |  |
| 2021 | 64,626,325.98 |  | 20.00 |  | 5.00 |  | 3,231,316.30 |  | 19.53 |  | 0.0235 |  | 1,518,719 |  |
|  | | | | | | | | | | | | | | |
|  | 838,456,573.18 |  |  | | | | 41,922,828.69 |  |  | | | | 310,187,367 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 5.00 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 30-L0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 144.73 |  | 30.00 |  | 3.33 |  | 4.82 |  | 6.27 |  | 0.7910 |  | 114 |  |
| 1951 | 25.91 |  | 30.00 |  | 3.33 |  | 0.86 |  | 7.33 |  | 0.7557 |  | 20 |  |
| 1957 | 446.89 |  | 30.00 |  | 3.33 |  | 14.88 |  | 8.11 |  | 0.7297 |  | 326 |  |
| 1958 | 343.79 |  | 30.00 |  | 3.33 |  | 11.45 |  | 8.25 |  | 0.7250 |  | 249 |  |
| 1962 | 996.90 |  | 30.00 |  | 3.33 |  | 33.20 |  | 8.88 |  | 0.7040 |  | 702 |  |
| 1966 | 182.96 |  | 30.00 |  | 3.33 |  | 6.09 |  | 9.57 |  | 0.6810 |  | 125 |  |
| 1968 | 5.09 |  | 30.00 |  | 3.33 |  | 0.17 |  | 9.94 |  | 0.6687 |  | 3 |  |
| 1970 | 13,631.41 |  | 30.00 |  | 3.33 |  | 453.93 |  | 10.32 |  | 0.6560 |  | 8,942 |  |
| 1971 | 36,780.58 |  | 30.00 |  | 3.33 |  | 1,224.79 |  | 10.52 |  | 0.6493 |  | 23,883 |  |
| 1972 | 77,154.32 |  | 30.00 |  | 3.33 |  | 2,569.24 |  | 10.73 |  | 0.6423 |  | 49,559 |  |
| 1973 | 115,633.50 |  | 30.00 |  | 3.33 |  | 3,850.60 |  | 10.94 |  | 0.6353 |  | 73,465 |  |
| 1974 | 132,430.93 |  | 30.00 |  | 3.33 |  | 4,409.95 |  | 11.15 |  | 0.6283 |  | 83,210 |  |
| 1975 | 175,692.92 |  | 30.00 |  | 3.33 |  | 5,850.57 |  | 11.37 |  | 0.6210 |  | 109,105 |  |
| 1976 | 242,993.34 |  | 30.00 |  | 3.33 |  | 8,091.68 |  | 11.59 |  | 0.6137 |  | 149,118 |  |
| 1977 | 144,866.37 |  | 30.00 |  | 3.33 |  | 4,824.05 |  | 11.82 |  | 0.6060 |  | 87,789 |  |
| 1978 | 220,651.93 |  | 30.00 |  | 3.33 |  | 7,347.71 |  | 12.05 |  | 0.5983 |  | 132,023 |  |
| 1979 | 665,701.16 |  | 30.00 |  | 3.33 |  | 22,167.85 |  | 12.28 |  | 0.5907 |  | 393,210 |  |
| 1980 | 601,301.00 |  | 30.00 |  | 3.33 |  | 20,023.32 |  | 12.52 |  | 0.5827 |  | 350,360 |  |
| 1981 | 509,280.71 |  | 30.00 |  | 3.33 |  | 16,959.05 |  | 12.77 |  | 0.5743 |  | 292,495 |  |
| 1982 | 506,020.55 |  | 30.00 |  | 3.33 |  | 16,850.48 |  | 13.02 |  | 0.5660 |  | 286,408 |  |
| 1983 | 634,454.95 |  | 30.00 |  | 3.33 |  | 21,127.35 |  | 13.27 |  | 0.5577 |  | 353,816 |  |
| 1984 | 821,058.55 |  | 30.00 |  | 3.33 |  | 27,341.25 |  | 13.53 |  | 0.5490 |  | 450,761 |  |
| 1985 | 783,592.02 |  | 30.00 |  | 3.33 |  | 26,093.61 |  | 13.79 |  | 0.5403 |  | 423,398 |  |
| 1986 | 1,131,130.67 |  | 30.00 |  | 3.33 |  | 37,666.65 |  | 14.06 |  | 0.5313 |  | 601,004 |  |
| 1987 | 2,627,034.90 |  | 30.00 |  | 3.33 |  | 87,480.26 |  | 14.33 |  | 0.5223 |  | 1,372,179 |  |
| 1988 | 3,193,484.02 |  | 30.00 |  | 3.33 |  | 106,343.02 |  | 14.61 |  | 0.5130 |  | 1,638,257 |  |
| 1989 | 4,207,844.83 |  | 30.00 |  | 3.33 |  | 140,121.23 |  | 14.89 |  | 0.5037 |  | 2,119,365 |  |
| 1990 | 3,110,627.19 |  | 30.00 |  | 3.33 |  | 103,583.89 |  | 15.18 |  | 0.4940 |  | 1,536,650 |  |
| 1991 | 1,865,229.51 |  | 30.00 |  | 3.33 |  | 62,112.14 |  | 15.48 |  | 0.4840 |  | 902,771 |  |
| 1992 | 2,089,510.00 |  | 30.00 |  | 3.33 |  | 69,580.68 |  | 15.78 |  | 0.4740 |  | 990,428 |  |
| 1993 | 2,445,216.73 |  | 30.00 |  | 3.33 |  | 81,425.72 |  | 16.08 |  | 0.4640 |  | 1,134,581 |  |
| 1994 | 2,513,283.41 |  | 30.00 |  | 3.33 |  | 83,692.34 |  | 16.39 |  | 0.4537 |  | 1,140,201 |  |
| 1995 | 2,413,462.62 |  | 30.00 |  | 3.33 |  | 80,368.31 |  | 16.71 |  | 0.4430 |  | 1,069,164 |  |
| 1996 | 2,237,434.23 |  | 30.00 |  | 3.33 |  | 74,506.56 |  | 17.03 |  | 0.4323 |  | 967,310 |  |
| 1997 | 2,247,701.80 |  | 30.00 |  | 3.33 |  | 74,848.47 |  | 17.36 |  | 0.4213 |  | 947,024 |  |
| 1998 | 2,063,319.63 |  | 30.00 |  | 3.33 |  | 68,708.54 |  | 17.69 |  | 0.4103 |  | 846,642 |  |
| 1999 | 1,979,939.63 |  | 30.00 |  | 3.33 |  | 65,931.99 |  | 18.03 |  | 0.3990 |  | 789,996 |  |
| 2000 | 2,149,902.00 |  | 30.00 |  | 3.33 |  | 71,591.74 |  | 18.38 |  | 0.3873 |  | 832,722 |  |
| 2001 | 1,984,692.16 |  | 30.00 |  | 3.33 |  | 66,090.25 |  | 18.73 |  | 0.3757 |  | 745,589 |  |
| 2002 | 1,714,351.37 |  | 30.00 |  | 3.33 |  | 57,087.90 |  | 19.09 |  | 0.3637 |  | 623,458 |  |
| 2003 | 1,839,228.98 |  | 30.00 |  | 3.33 |  | 61,246.33 |  | 19.46 |  | 0.3513 |  | 646,176 |  |
| 2004 | 1,319,813.36 |  | 30.00 |  | 3.33 |  | 43,949.78 |  | 19.84 |  | 0.3387 |  | 446,981 |  |
| 2005 | 1,837,239.95 |  | 30.00 |  | 3.33 |  | 61,180.09 |  | 20.22 |  | 0.3260 |  | 598,940 |  |
| 2006 | 1,613,547.24 |  | 30.00 |  | 3.33 |  | 53,731.12 |  | 20.61 |  | 0.3130 |  | 505,040 |  |
| 2007 | 1,705,873.50 |  | 30.00 |  | 3.33 |  | 56,805.59 |  | 21.02 |  | 0.2993 |  | 510,619 |  |
| 2008 | 1,072,631.45 |  | 30.00 |  | 3.33 |  | 35,718.63 |  | 21.45 |  | 0.2850 |  | 305,700 |  |
| 2009 | 1,561,794.03 |  | 30.00 |  | 3.33 |  | 52,007.74 |  | 21.90 |  | 0.2700 |  | 421,684 |  |
| 2010 | 1,811,092.43 |  | 30.00 |  | 3.33 |  | 60,309.38 |  | 22.38 |  | 0.2540 |  | 460,017 |  |
| 2011 | 1,941,510.64 |  | 30.00 |  | 3.33 |  | 64,652.30 |  | 22.88 |  | 0.2373 |  | 460,779 |  |
| 2012 | 2,054,448.07 |  | 30.00 |  | 3.33 |  | 68,413.12 |  | 23.40 |  | 0.2200 |  | 451,979 |  |
| 2013 | 2,335,541.92 |  | 30.00 |  | 3.33 |  | 77,773.55 |  | 23.96 |  | 0.2013 |  | 470,215 |  |
| 2014 | 2,521,145.93 |  | 30.00 |  | 3.33 |  | 83,954.16 |  | 24.54 |  | 0.1820 |  | 458,849 |  |
| 2015 | 2,252,576.68 |  | 30.00 |  | 3.33 |  | 75,010.80 |  | 25.16 |  | 0.1613 |  | 363,408 |  |
| 2016 | 2,189,591.94 |  | 30.00 |  | 3.33 |  | 72,913.41 |  | 25.80 |  | 0.1400 |  | 306,543 |  |
| 2017 | 1,848,642.56 |  | 30.00 |  | 3.33 |  | 61,559.80 |  | 26.48 |  | 0.1173 |  | 216,901 |  |
| 2018 | 1,911,963.51 |  | 30.00 |  | 3.33 |  | 63,668.38 |  | 27.19 |  | 0.0937 |  | 179,094 |  |
| 2019 | 8,446,942.06 |  | 30.00 |  | 3.33 |  | 281,283.17 |  | 27.93 |  | 0.0690 |  | 582,839 |  |
| 2020 | 11,048,066.69 |  | 30.00 |  | 3.33 |  | 367,900.62 |  | 28.72 |  | 0.0427 |  | 471,421 |  |
| 2021 | 10,528,659.98 |  | 30.00 |  | 3.33 |  | 350,604.38 |  | 29.55 |  | 0.0150 |  | 157,930 |  |
|  | | | | | | | | | | | | | | |
|  | 105,497,866.13 |  |  | | | | 3,513,078.94 |  |  | | | | 29,541,537 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 15-S3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 2020 | 2,289,731.72 |  | 15.00 |  | 6.67 |  | 152,725.11 |  | 13.50 |  | 0.1000 |  | 228,973 |  |
| 2021 | 8,300,000.04 |  | 15.00 |  | 6.67 |  | 553,610.00 |  | 14.50 |  | 0.0333 |  | 276,639 |  |
|  | | | | | | | | | | | | | | |
|  | 10,589,731.76 |  |  | | | | 706,335.11 |  |  | | | | 505,612 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 6.67 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 30-O1 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1968 | 19.28 |  | 30.00 |  | 3.33 |  | 0.64 |  | 3.25 |  | 0.8917 |  | 17 |  |
| 1969 | 377,867.75 |  | 30.00 |  | 3.33 |  | 12,583.00 |  | 3.75 |  | 0.8750 |  | 330,634 |  |
| 1970 | 1,150,213.45 |  | 30.00 |  | 3.33 |  | 38,302.11 |  | 4.25 |  | 0.8583 |  | 987,263 |  |
| 1971 | 808,354.68 |  | 30.00 |  | 3.33 |  | 26,918.21 |  | 4.75 |  | 0.8417 |  | 680,368 |  |
| 1972 | 1,252,878.16 |  | 30.00 |  | 3.33 |  | 41,720.84 |  | 5.25 |  | 0.8250 |  | 1,033,624 |  |
| 1973 | 1,517,032.06 |  | 30.00 |  | 3.33 |  | 50,517.17 |  | 5.75 |  | 0.8083 |  | 1,226,263 |  |
| 1974 | 1,266,429.27 |  | 30.00 |  | 3.33 |  | 42,172.09 |  | 6.25 |  | 0.7917 |  | 1,002,594 |  |
| 1975 | 2,499,611.32 |  | 30.00 |  | 3.33 |  | 83,237.06 |  | 6.75 |  | 0.7750 |  | 1,937,199 |  |
| 1976 | 2,255,788.86 |  | 30.00 |  | 3.33 |  | 75,117.77 |  | 7.25 |  | 0.7583 |  | 1,710,632 |  |
| 1977 | 2,181,752.63 |  | 30.00 |  | 3.33 |  | 72,652.36 |  | 7.75 |  | 0.7417 |  | 1,618,140 |  |
| 1978 | 2,369,715.73 |  | 30.00 |  | 3.33 |  | 78,911.53 |  | 8.25 |  | 0.7250 |  | 1,718,044 |  |
| 1979 | 4,274,994.21 |  | 30.00 |  | 3.33 |  | 142,357.31 |  | 8.75 |  | 0.7083 |  | 3,028,107 |  |
| 1980 | 6,067,281.34 |  | 30.00 |  | 3.33 |  | 202,040.47 |  | 9.25 |  | 0.6917 |  | 4,196,556 |  |
| 1981 | 3,025,426.16 |  | 30.00 |  | 3.33 |  | 100,746.69 |  | 9.75 |  | 0.6750 |  | 2,042,163 |  |
| 1982 | 2,077,416.38 |  | 30.00 |  | 3.33 |  | 69,177.97 |  | 10.25 |  | 0.6583 |  | 1,367,626 |  |
| 1983 | 3,531,105.31 |  | 30.00 |  | 3.33 |  | 117,585.81 |  | 10.75 |  | 0.6417 |  | 2,265,804 |  |
| 1984 | 4,456,899.65 |  | 30.00 |  | 3.33 |  | 148,414.76 |  | 11.25 |  | 0.6250 |  | 2,785,562 |  |
| 1985 | 4,696,576.73 |  | 30.00 |  | 3.33 |  | 156,396.01 |  | 11.75 |  | 0.6083 |  | 2,857,069 |  |
| 1986 | 4,751,536.23 |  | 30.00 |  | 3.33 |  | 158,226.16 |  | 12.25 |  | 0.5917 |  | 2,811,341 |  |
| 1987 | 5,165,835.63 |  | 30.00 |  | 3.33 |  | 172,022.33 |  | 12.75 |  | 0.5750 |  | 2,970,355 |  |
| 1988 | 5,958,628.48 |  | 30.00 |  | 3.33 |  | 198,422.33 |  | 13.25 |  | 0.5583 |  | 3,326,881 |  |
| 1989 | 8,093,059.56 |  | 30.00 |  | 3.33 |  | 269,498.88 |  | 13.75 |  | 0.5417 |  | 4,383,768 |  |
| 1990 | 8,348,610.15 |  | 30.00 |  | 3.33 |  | 278,008.72 |  | 14.25 |  | 0.5250 |  | 4,383,020 |  |
| 1991 | 6,776,587.72 |  | 30.00 |  | 3.33 |  | 225,660.37 |  | 14.75 |  | 0.5083 |  | 3,444,743 |  |
| 1992 | 5,344,551.96 |  | 30.00 |  | 3.33 |  | 177,973.58 |  | 15.25 |  | 0.4917 |  | 2,627,756 |  |
| 1993 | 6,101,725.92 |  | 30.00 |  | 3.33 |  | 203,187.47 |  | 15.75 |  | 0.4750 |  | 2,898,320 |  |
| 1994 | 5,603,060.26 |  | 30.00 |  | 3.33 |  | 186,581.91 |  | 16.25 |  | 0.4583 |  | 2,568,051 |  |
| 1995 | 7,031,173.83 |  | 30.00 |  | 3.33 |  | 234,138.09 |  | 16.75 |  | 0.4417 |  | 3,105,459 |  |
| 1996 | 7,810,013.77 |  | 30.00 |  | 3.33 |  | 260,073.46 |  | 17.25 |  | 0.4250 |  | 3,319,256 |  |
| 1997 | 8,817,577.58 |  | 30.00 |  | 3.33 |  | 293,625.33 |  | 17.75 |  | 0.4083 |  | 3,600,481 |  |
| 1998 | 9,614,392.30 |  | 30.00 |  | 3.33 |  | 320,159.26 |  | 18.25 |  | 0.3917 |  | 3,765,669 |  |
| 1999 | 8,021,130.47 |  | 30.00 |  | 3.33 |  | 267,103.64 |  | 18.75 |  | 0.3750 |  | 3,007,924 |  |
| 2000 | 9,407,475.03 |  | 30.00 |  | 3.33 |  | 313,268.92 |  | 19.25 |  | 0.3583 |  | 3,370,981 |  |
| 2001 | 10,379,677.49 |  | 30.00 |  | 3.33 |  | 345,643.26 |  | 19.75 |  | 0.3417 |  | 3,546,424 |  |
| 2002 | 15,360,854.14 |  | 30.00 |  | 3.33 |  | 511,516.44 |  | 20.25 |  | 0.3250 |  | 4,992,278 |  |
| 2003 | 13,571,678.26 |  | 30.00 |  | 3.33 |  | 451,936.89 |  | 20.75 |  | 0.3083 |  | 4,184,556 |  |
| 2004 | 14,627,810.86 |  | 30.00 |  | 3.33 |  | 487,106.10 |  | 21.25 |  | 0.2917 |  | 4,266,494 |  |
| 2005 | 19,686,213.66 |  | 30.00 |  | 3.33 |  | 655,550.91 |  | 21.75 |  | 0.2750 |  | 5,413,709 |  |
| 2006 | 22,675,475.55 |  | 30.00 |  | 3.33 |  | 755,093.34 |  | 22.25 |  | 0.2583 |  | 5,857,756 |  |
| 2007 | 26,700,077.91 |  | 30.00 |  | 3.33 |  | 889,112.59 |  | 22.75 |  | 0.2417 |  | 6,452,608 |  |
| 2008 | 11,706,832.36 |  | 30.00 |  | 3.33 |  | 389,837.52 |  | 23.25 |  | 0.2250 |  | 2,634,037 |  |
| 2009 | 13,799,019.35 |  | 30.00 |  | 3.33 |  | 459,507.34 |  | 23.75 |  | 0.2083 |  | 2,874,750 |  |
| 2010 | 14,470,806.06 |  | 30.00 |  | 3.33 |  | 481,877.84 |  | 24.25 |  | 0.1917 |  | 2,773,619 |  |
| 2011 | 15,119,944.97 |  | 30.00 |  | 3.33 |  | 503,494.17 |  | 24.75 |  | 0.1750 |  | 2,645,990 |  |
| 2012 | 11,804,785.96 |  | 30.00 |  | 3.33 |  | 393,099.37 |  | 25.25 |  | 0.1583 |  | 1,869,052 |  |
| 2013 | 12,508,897.22 |  | 30.00 |  | 3.33 |  | 416,546.28 |  | 25.75 |  | 0.1417 |  | 1,772,135 |  |
| 2014 | 16,235,644.95 |  | 30.00 |  | 3.33 |  | 540,646.98 |  | 26.25 |  | 0.1250 |  | 2,029,456 |  |
| 2015 | 16,553,271.39 |  | 30.00 |  | 3.33 |  | 551,223.94 |  | 26.75 |  | 0.1083 |  | 1,793,216 |  |
| 2016 | 21,091,179.38 |  | 30.00 |  | 3.33 |  | 702,336.27 |  | 27.25 |  | 0.0917 |  | 1,933,428 |  |
| 2017 | 19,713,472.50 |  | 30.00 |  | 3.33 |  | 656,458.63 |  | 27.75 |  | 0.0750 |  | 1,478,510 |  |
| 2018 | 86,997,404.44 |  | 30.00 |  | 3.33 |  | 2,897,013.57 |  | 28.25 |  | 0.0583 |  | 5,074,559 |  |
| 2019 | 75,781,880.63 |  | 30.00 |  | 3.33 |  | 2,523,536.62 |  | 28.75 |  | 0.0417 |  | 3,157,831 |  |
| 2020 | 97,306,276.23 |  | 30.00 |  | 3.33 |  | 3,240,299.00 |  | 29.25 |  | 0.0250 |  | 2,432,657 |  |
| 2021 | 90,951,294.84 |  | 30.00 |  | 3.33 |  | 3,028,678.12 |  | 29.75 |  | 0.0083 |  | 757,624 |  |
|  | | | | | | | | | | | | | | |
|  | 777,697,220.01 |  |  | | | | 25,897,317.43 |  |  | | | | 148,312,359 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 3.33 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 60-R1 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1941 | 1,428.71 |  | 60.00 |  | 1.67 |  | 23.86 |  | 13.18 |  | 0.7803 |  | 1,115 |  |
| 1942 | 6,051.20 |  | 60.00 |  | 1.67 |  | 101.06 |  | 13.56 |  | 0.7740 |  | 4,684 |  |
| 1944 | 639.50 |  | 60.00 |  | 1.67 |  | 10.68 |  | 14.35 |  | 0.7608 |  | 487 |  |
| 1946 | 282.22 |  | 60.00 |  | 1.67 |  | 4.71 |  | 15.15 |  | 0.7475 |  | 211 |  |
| 1947 | 1,085.08 |  | 60.00 |  | 1.67 |  | 18.12 |  | 15.55 |  | 0.7408 |  | 804 |  |
| 1948 | 5,123.17 |  | 60.00 |  | 1.67 |  | 85.56 |  | 15.97 |  | 0.7338 |  | 3,760 |  |
| 1949 | 184,168.07 |  | 60.00 |  | 1.67 |  | 3,075.61 |  | 16.38 |  | 0.7270 |  | 133,890 |  |
| 1950 | 9,639.66 |  | 60.00 |  | 1.67 |  | 160.98 |  | 16.81 |  | 0.7198 |  | 6,939 |  |
| 1951 | 148,130.25 |  | 60.00 |  | 1.67 |  | 2,473.78 |  | 17.23 |  | 0.7128 |  | 105,592 |  |
| 1952 | 47,267.29 |  | 60.00 |  | 1.67 |  | 789.36 |  | 17.66 |  | 0.7057 |  | 33,355 |  |
| 1953 | 22,803.91 |  | 60.00 |  | 1.67 |  | 380.83 |  | 18.10 |  | 0.6983 |  | 15,925 |  |
| 1954 | 61,401.82 |  | 60.00 |  | 1.67 |  | 1,025.41 |  | 18.54 |  | 0.6910 |  | 42,429 |  |
| 1955 | 75,527.50 |  | 60.00 |  | 1.67 |  | 1,261.31 |  | 18.99 |  | 0.6835 |  | 51,623 |  |
| 1956 | 98,003.74 |  | 60.00 |  | 1.67 |  | 1,636.66 |  | 19.45 |  | 0.6758 |  | 66,234 |  |
| 1957 | 82,050.52 |  | 60.00 |  | 1.67 |  | 1,370.24 |  | 19.90 |  | 0.6683 |  | 54,837 |  |
| 1958 | 157,744.06 |  | 60.00 |  | 1.67 |  | 2,634.33 |  | 20.37 |  | 0.6605 |  | 104,190 |  |
| 1959 | 410,508.55 |  | 60.00 |  | 1.67 |  | 6,855.49 |  | 20.84 |  | 0.6527 |  | 267,927 |  |
| 1960 | 318,840.43 |  | 60.00 |  | 1.67 |  | 5,324.64 |  | 21.31 |  | 0.6448 |  | 205,598 |  |
| 1961 | 19,103.76 |  | 60.00 |  | 1.67 |  | 319.03 |  | 21.79 |  | 0.6368 |  | 12,166 |  |
| 1962 | 149,284.19 |  | 60.00 |  | 1.67 |  | 2,493.05 |  | 22.28 |  | 0.6287 |  | 93,850 |  |
| 1963 | 130,701.19 |  | 60.00 |  | 1.67 |  | 2,182.71 |  | 22.77 |  | 0.6205 |  | 81,100 |  |
| 1964 | 46,925.81 |  | 60.00 |  | 1.67 |  | 783.66 |  | 23.27 |  | 0.6122 |  | 28,727 |  |
| 1965 | 2,742,692.23 |  | 60.00 |  | 1.67 |  | 45,802.96 |  | 23.77 |  | 0.6038 |  | 1,656,120 |  |
| 1966 | 150,098.47 |  | 60.00 |  | 1.67 |  | 2,506.64 |  | 24.28 |  | 0.5953 |  | 89,358 |  |
| 1967 | 95,444.07 |  | 60.00 |  | 1.67 |  | 1,593.92 |  | 24.79 |  | 0.5868 |  | 56,009 |  |
| 1968 | 24,225.72 |  | 60.00 |  | 1.67 |  | 404.57 |  | 25.32 |  | 0.5780 |  | 14,002 |  |
| 1969 | 35,943.69 |  | 60.00 |  | 1.67 |  | 600.26 |  | 25.84 |  | 0.5693 |  | 20,464 |  |
| 1970 | 1,245,115.40 |  | 60.00 |  | 1.67 |  | 20,793.43 |  | 26.37 |  | 0.5605 |  | 697,887 |  |
| 1971 | 611,624.32 |  | 60.00 |  | 1.67 |  | 10,214.13 |  | 26.91 |  | 0.5515 |  | 337,311 |  |
| 1972 | 1,879,011.47 |  | 60.00 |  | 1.67 |  | 31,379.49 |  | 27.46 |  | 0.5423 |  | 1,019,044 |  |
| 1973 | 1,398,799.17 |  | 60.00 |  | 1.67 |  | 23,359.95 |  | 28.01 |  | 0.5332 |  | 745,798 |  |
| 1974 | 2,892,344.86 |  | 60.00 |  | 1.67 |  | 48,302.16 |  | 28.56 |  | 0.5240 |  | 1,515,589 |  |
| 1975 | 2,775,330.36 |  | 60.00 |  | 1.67 |  | 46,348.02 |  | 29.12 |  | 0.5147 |  | 1,428,379 |  |
| 1976 | 2,574,262.17 |  | 60.00 |  | 1.67 |  | 42,990.18 |  | 29.69 |  | 0.5052 |  | 1,300,440 |  |
| 1977 | 466,403.83 |  | 60.00 |  | 1.67 |  | 7,788.94 |  | 30.26 |  | 0.4957 |  | 231,182 |  |
| 1978 | 1,831,078.21 |  | 60.00 |  | 1.67 |  | 30,579.01 |  | 30.84 |  | 0.4860 |  | 889,904 |  |
| 1979 | 2,874,833.49 |  | 60.00 |  | 1.67 |  | 48,009.72 |  | 31.42 |  | 0.4763 |  | 1,369,369 |  |
| 1980 | 1,681,061.23 |  | 60.00 |  | 1.67 |  | 28,073.72 |  | 32.01 |  | 0.4665 |  | 784,215 |  |
| 1981 | 1,480,863.98 |  | 60.00 |  | 1.67 |  | 24,730.43 |  | 32.61 |  | 0.4565 |  | 676,014 |  |
| 1982 | 22,782,747.27 |  | 60.00 |  | 1.67 |  | 380,471.88 |  | 33.21 |  | 0.4465 |  | 10,172,497 |  |
| 1983 | 1,588,210.80 |  | 60.00 |  | 1.67 |  | 26,523.12 |  | 33.81 |  | 0.4365 |  | 693,254 |  |
| 1984 | 6,694,263.64 |  | 60.00 |  | 1.67 |  | 111,794.20 |  | 34.43 |  | 0.4262 |  | 2,852,894 |  |
| 1985 | 5,453,256.33 |  | 60.00 |  | 1.67 |  | 91,069.38 |  | 35.04 |  | 0.4160 |  | 2,268,555 |  |
| 1986 | 31,348,635.90 |  | 60.00 |  | 1.67 |  | 523,522.22 |  | 35.66 |  | 0.4057 |  | 12,717,201 |  |
| 1987 | 26,559,937.35 |  | 60.00 |  | 1.67 |  | 443,550.95 |  | 36.29 |  | 0.3952 |  | 10,495,690 |  |
| 1988 | 3,742,242.87 |  | 60.00 |  | 1.67 |  | 62,495.46 |  | 36.92 |  | 0.3847 |  | 1,439,529 |  |
| 1989 | 26,155,972.28 |  | 60.00 |  | 1.67 |  | 436,804.74 |  | 37.55 |  | 0.3742 |  | 9,786,780 |  |
| 1990 | 9,827,967.28 |  | 60.00 |  | 1.67 |  | 164,127.05 |  | 38.19 |  | 0.3635 |  | 3,572,466 |  |
| 1991 | 20,994,789.61 |  | 60.00 |  | 1.67 |  | 350,612.99 |  | 38.84 |  | 0.3527 |  | 7,404,232 |  |
| 1992 | 31,724,860.71 |  | 60.00 |  | 1.67 |  | 529,805.17 |  | 39.49 |  | 0.3418 |  | 10,844,509 |  |
| 1993 | 9,975,526.70 |  | 60.00 |  | 1.67 |  | 166,591.30 |  | 40.14 |  | 0.3310 |  | 3,301,899 |  |
| 1994 | 14,768,388.46 |  | 60.00 |  | 1.67 |  | 246,632.09 |  | 40.79 |  | 0.3202 |  | 4,728,395 |  |
| 1995 | 4,963,470.86 |  | 60.00 |  | 1.67 |  | 82,889.96 |  | 41.45 |  | 0.3092 |  | 1,534,556 |  |
| 1996 | 13,806,876.59 |  | 60.00 |  | 1.67 |  | 230,574.84 |  | 42.12 |  | 0.2980 |  | 4,114,449 |  |
| 1997 | 4,211,098.23 |  | 60.00 |  | 1.67 |  | 70,325.34 |  | 42.78 |  | 0.2870 |  | 1,208,585 |  |
| 1998 | 2,367,468.45 |  | 60.00 |  | 1.67 |  | 39,536.72 |  | 43.45 |  | 0.2758 |  | 653,019 |  |
| 1999 | 7,919,924.65 |  | 60.00 |  | 1.67 |  | 132,262.74 |  | 44.12 |  | 0.2647 |  | 2,096,166 |  |
| 2000 | 6,976,761.16 |  | 60.00 |  | 1.67 |  | 116,511.91 |  | 44.80 |  | 0.2533 |  | 1,767,423 |  |
| 2001 | 3,231,240.79 |  | 60.00 |  | 1.67 |  | 53,961.72 |  | 45.48 |  | 0.2420 |  | 781,960 |  |
| 2002 | 26,036,759.38 |  | 60.00 |  | 1.67 |  | 434,813.88 |  | 46.16 |  | 0.2307 |  | 6,005,899 |  |
| 2003 | 3,688,226.47 |  | 60.00 |  | 1.67 |  | 61,593.38 |  | 46.84 |  | 0.2193 |  | 808,939 |  |
| 2004 | 2,537,240.02 |  | 60.00 |  | 1.67 |  | 42,371.91 |  | 47.52 |  | 0.2080 |  | 527,746 |  |
| 2005 | 3,664,154.59 |  | 60.00 |  | 1.67 |  | 61,191.38 |  | 48.21 |  | 0.1965 |  | 720,006 |  |
| 2006 | 3,522,500.10 |  | 60.00 |  | 1.67 |  | 58,825.75 |  | 48.90 |  | 0.1850 |  | 651,663 |  |
| 2007 | 13,973,560.56 |  | 60.00 |  | 1.67 |  | 233,358.46 |  | 49.60 |  | 0.1733 |  | 2,422,037 |  |
| 2008 | 6,747,931.14 |  | 60.00 |  | 1.67 |  | 112,690.45 |  | 50.29 |  | 0.1618 |  | 1,092,018 |  |
| 2009 | 4,550,322.72 |  | 60.00 |  | 1.67 |  | 75,990.39 |  | 50.99 |  | 0.1502 |  | 683,322 |  |
| 2010 | 10,913,990.06 |  | 60.00 |  | 1.67 |  | 182,263.63 |  | 51.69 |  | 0.1385 |  | 1,511,588 |  |
| 2011 | 16,334,136.42 |  | 60.00 |  | 1.67 |  | 272,780.08 |  | 52.40 |  | 0.1267 |  | 2,069,045 |  |
| 2012 | 9,987,230.05 |  | 60.00 |  | 1.67 |  | 166,786.74 |  | 53.10 |  | 0.1150 |  | 1,148,531 |  |
| 2013 | 8,214,137.81 |  | 60.00 |  | 1.67 |  | 137,176.10 |  | 53.81 |  | 0.1032 |  | 847,453 |  |
| 2014 | 33,503,653.83 |  | 60.00 |  | 1.67 |  | 559,511.02 |  | 54.53 |  | 0.0912 |  | 3,054,528 |  |
| 2015 | 28,505,657.82 |  | 60.00 |  | 1.67 |  | 476,044.49 |  | 55.25 |  | 0.0792 |  | 2,256,793 |  |
| 2016 | 25,193,347.01 |  | 60.00 |  | 1.67 |  | 420,728.90 |  | 55.97 |  | 0.0672 |  | 1,692,237 |  |
| 2017 | 63,881,654.73 |  | 60.00 |  | 1.67 |  | 1,066,823.63 |  | 56.69 |  | 0.0552 |  | 3,524,351 |  |
| 2018 | 78,403,773.81 |  | 60.00 |  | 1.67 |  | 1,309,343.02 |  | 57.42 |  | 0.0430 |  | 3,371,362 |  |
| 2019 | 32,505,809.20 |  | 60.00 |  | 1.67 |  | 542,847.01 |  | 58.15 |  | 0.0308 |  | 1,002,154 |  |
| 2020 | 53,132,355.69 |  | 60.00 |  | 1.67 |  | 887,310.34 |  | 58.89 |  | 0.0185 |  | 982,949 |  |
| 2021 | 88,780,129.72 |  | 60.00 |  | 1.67 |  | 1,482,628.17 |  | 59.63 |  | 0.0062 |  | 547,773 |  |
|  | | | | | | | | | | | | | | |
|  | 795,906,054.36 |  |  | | | | 13,291,631.12 |  |  | | | | 141,500,981 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.67 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 7-L2.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1996 | 16,700.00 |  | 7.00 |  |  |  |  |  |  |  | 1.0000 |  | 16,700 |  |
| 1997 | 744.00 |  | 7.00 |  |  |  |  |  |  |  | 1.0000 |  | 744 |  |
| 2000 | 73,561.88 |  | 7.00 |  |  |  |  |  |  |  | 1.0000 |  | 73,562 |  |
| 2003 | 21,486.00 |  | 7.00 |  | 14.29 |  | 3,070.35 |  | 0.26 |  | 0.9629 |  | 20,688 |  |
| 2005 | 22,243.00 |  | 7.00 |  | 14.29 |  | 3,178.52 |  | 0.61 |  | 0.9129 |  | 20,305 |  |
| 2006 | 56,978.82 |  | 7.00 |  | 14.29 |  | 8,142.27 |  | 0.78 |  | 0.8886 |  | 50,630 |  |
| 2007 | 179,998.30 |  | 7.00 |  | 14.29 |  | 25,721.76 |  | 0.93 |  | 0.8671 |  | 156,084 |  |
| 2008 | 65,541.17 |  | 7.00 |  | 14.29 |  | 9,365.83 |  | 1.08 |  | 0.8457 |  | 55,429 |  |
| 2009 | 38,963.69 |  | 7.00 |  | 14.29 |  | 5,567.91 |  | 1.24 |  | 0.8229 |  | 32,062 |  |
| 2010 | 33,695.00 |  | 7.00 |  | 14.29 |  | 4,815.02 |  | 1.43 |  | 0.7957 |  | 26,811 |  |
| 2012 | 296,774.99 |  | 7.00 |  | 14.29 |  | 42,409.15 |  | 1.88 |  | 0.7314 |  | 217,070 |  |
| 2013 | 610,104.44 |  | 7.00 |  | 14.29 |  | 87,183.92 |  | 2.11 |  | 0.6986 |  | 426,201 |  |
| 2014 | 2,715,350.83 |  | 7.00 |  | 14.29 |  | 388,023.63 |  | 2.32 |  | 0.6686 |  | 1,815,402 |  |
| 2015 | 3,430,922.00 |  | 7.00 |  | 14.29 |  | 490,278.75 |  | 2.51 |  | 0.6414 |  | 2,200,696 |  |
| 2016 | 704,792.14 |  | 7.00 |  | 14.29 |  | 100,714.80 |  | 2.77 |  | 0.6043 |  | 425,899 |  |
| 2017 | 1,162,495.58 |  | 7.00 |  | 14.29 |  | 166,120.62 |  | 3.20 |  | 0.5429 |  | 631,072 |  |
| 2018 | 3,639,135.26 |  | 7.00 |  | 14.29 |  | 520,032.43 |  | 3.83 |  | 0.4529 |  | 1,648,019 |  |
| 2019 | 298,481.12 |  | 7.00 |  | 14.29 |  | 42,652.95 |  | 4.63 |  | 0.3386 |  | 101,057 |  |
| 2020 | 1,609,761.86 |  | 7.00 |  | 14.29 |  | 230,034.97 |  | 5.53 |  | 0.2100 |  | 338,050 |  |
| 2021 | 1,871,152.85 |  | 7.00 |  | 14.29 |  | 267,387.74 |  | 6.50 |  | 0.0714 |  | 133,656 |  |
|  | | | | | | | | | | | | | | |
|  | 16,848,882.93 |  |  | | | | 2,394,700.62 |  |  | | | | 8,390,137 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 14.21 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 9-L3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1997 | 19,483.72 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 19,484 |  |
| 2000 | 36,165.55 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 36,166 |  |
| 2002 | 17,974.95 |  | 9.00 |  | 11.11 |  | 1,997.02 |  | 0.39 |  | 0.9567 |  | 17,196 |  |
| 2003 | 4,906,875.21 |  | 9.00 |  | 11.11 |  | 545,153.84 |  | 0.58 |  | 0.9356 |  | 4,590,676 |  |
| 2004 | 157,037.35 |  | 9.00 |  | 11.11 |  | 17,446.85 |  | 0.78 |  | 0.9133 |  | 143,427 |  |
| 2005 | 327,801.49 |  | 9.00 |  | 11.11 |  | 36,418.75 |  | 0.99 |  | 0.8900 |  | 291,743 |  |
| 2006 | 212,051.66 |  | 9.00 |  | 11.11 |  | 23,558.94 |  | 1.21 |  | 0.8656 |  | 183,543 |  |
| 2007 | 104,560.90 |  | 9.00 |  | 11.11 |  | 11,616.72 |  | 1.44 |  | 0.8400 |  | 87,831 |  |
| 2008 | 1,194,955.03 |  | 9.00 |  | 11.11 |  | 132,759.50 |  | 1.69 |  | 0.8122 |  | 970,566 |  |
| 2009 | 310,257.50 |  | 9.00 |  | 11.11 |  | 34,469.61 |  | 1.95 |  | 0.7833 |  | 243,034 |  |
| 2010 | 222,562.08 |  | 9.00 |  | 11.11 |  | 24,726.65 |  | 2.20 |  | 0.7556 |  | 168,159 |  |
| 2011 | 492,174.62 |  | 9.00 |  | 11.11 |  | 54,680.60 |  | 2.43 |  | 0.7300 |  | 359,287 |  |
| 2012 | 6,331,084.61 |  | 9.00 |  | 11.11 |  | 703,383.50 |  | 2.62 |  | 0.7089 |  | 4,488,043 |  |
| 2013 | 3,939,684.07 |  | 9.00 |  | 11.11 |  | 437,698.90 |  | 2.79 |  | 0.6900 |  | 2,718,382 |  |
| 2014 | 7,427,895.73 |  | 9.00 |  | 11.11 |  | 825,239.22 |  | 3.02 |  | 0.6644 |  | 4,935,391 |  |
| 2015 | 12,883,696.72 |  | 9.00 |  | 11.11 |  | 1,431,378.71 |  | 3.41 |  | 0.6211 |  | 8,002,193 |  |
| 2016 | 8,942,470.86 |  | 9.00 |  | 11.11 |  | 993,508.51 |  | 3.98 |  | 0.5578 |  | 4,987,931 |  |
| 2017 | 651,715.21 |  | 9.00 |  | 11.11 |  | 72,405.56 |  | 4.74 |  | 0.4733 |  | 308,476 |  |
| 2018 | 4,856,416.74 |  | 9.00 |  | 11.11 |  | 539,547.90 |  | 5.60 |  | 0.3778 |  | 1,834,657 |  |
| 2019 | 9,633,706.58 |  | 9.00 |  | 11.11 |  | 1,070,304.80 |  | 6.53 |  | 0.2744 |  | 2,643,874 |  |
| 2020 | 8,645,616.67 |  | 9.00 |  | 11.11 |  | 960,528.01 |  | 7.50 |  | 0.1667 |  | 1,440,965 |  |
| 2021 | 9,085,291.71 |  | 9.00 |  | 11.11 |  | 1,009,375.91 |  | 8.50 |  | 0.0556 |  | 504,779 |  |
|  | | | | | | | | | | | | | | |
|  | 80,399,478.96 |  |  | | | | 8,926,199.50 |  |  | | | | 38,975,803 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 11.10 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 13-L3 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1989 | 9,263.08 |  | 13.00 |  |  |  |  |  |  |  | 1.0000 |  | 9,263 |  |
| 1990 | 3,050.29 |  | 13.00 |  |  |  |  |  |  |  | 1.0000 |  | 3,050 |  |
| 1991 | 13,041.12 |  | 13.00 |  | 7.69 |  | 1,002.86 |  | 0.15 |  | 0.9885 |  | 12,891 |  |
| 1993 | 57,358.46 |  | 13.00 |  | 7.69 |  | 4,410.87 |  | 0.50 |  | 0.9615 |  | 55,152 |  |
| 1994 | 206,184.38 |  | 13.00 |  | 7.69 |  | 15,855.58 |  | 0.69 |  | 0.9469 |  | 195,240 |  |
| 1995 | 96,682.56 |  | 13.00 |  | 7.69 |  | 7,434.89 |  | 0.88 |  | 0.9323 |  | 90,138 |  |
| 1996 | 298,814.86 |  | 13.00 |  | 7.69 |  | 22,978.86 |  | 1.08 |  | 0.9169 |  | 273,989 |  |
| 1997 | 39,180.38 |  | 13.00 |  | 7.69 |  | 3,012.97 |  | 1.29 |  | 0.9008 |  | 35,293 |  |
| 1998 | 54,977.28 |  | 13.00 |  | 7.69 |  | 4,227.75 |  | 1.50 |  | 0.8846 |  | 48,634 |  |
| 1999 | 186,860.26 |  | 13.00 |  | 7.69 |  | 14,369.55 |  | 1.72 |  | 0.8677 |  | 162,137 |  |
| 2000 | 359,053.41 |  | 13.00 |  | 7.69 |  | 27,611.21 |  | 1.95 |  | 0.8500 |  | 305,195 |  |
| 2001 | 694,113.88 |  | 13.00 |  | 7.69 |  | 53,377.36 |  | 2.19 |  | 0.8315 |  | 577,183 |  |
| 2002 | 473,733.22 |  | 13.00 |  | 7.69 |  | 36,430.08 |  | 2.44 |  | 0.8123 |  | 384,818 |  |
| 2003 | 23,852,895.46 |  | 13.00 |  | 7.69 |  | 1,834,287.66 |  | 2.70 |  | 0.7923 |  | 18,898,888 |  |
| 2004 | 1,801,052.32 |  | 13.00 |  | 7.69 |  | 138,500.92 |  | 2.96 |  | 0.7723 |  | 1,390,971 |  |
| 2005 | 3,459,725.61 |  | 13.00 |  | 7.69 |  | 266,052.90 |  | 3.21 |  | 0.7531 |  | 2,605,450 |  |
| 2006 | 3,359,415.66 |  | 13.00 |  | 7.69 |  | 258,339.06 |  | 3.44 |  | 0.7354 |  | 2,470,447 |  |
| 2007 | 6,944,342.92 |  | 13.00 |  | 7.69 |  | 534,019.97 |  | 3.65 |  | 0.7192 |  | 4,994,580 |  |
| 2008 | 9,701,845.66 |  | 13.00 |  | 7.69 |  | 746,071.93 |  | 3.82 |  | 0.7062 |  | 6,850,958 |  |
| 2009 | 7,219,141.69 |  | 13.00 |  | 7.69 |  | 555,152.00 |  | 3.99 |  | 0.6931 |  | 5,003,443 |  |
| 2010 | 175,889.58 |  | 13.00 |  | 7.69 |  | 13,525.91 |  | 4.19 |  | 0.6777 |  | 119,199 |  |
| 2011 | 7,296,204.08 |  | 13.00 |  | 7.69 |  | 561,078.09 |  | 4.47 |  | 0.6562 |  | 4,787,404 |  |
| 2012 | 42,676,946.25 |  | 13.00 |  | 7.69 |  | 3,281,857.17 |  | 4.87 |  | 0.6254 |  | 26,689,309 |  |
| 2013 | 4,838,125.90 |  | 13.00 |  | 7.69 |  | 372,051.88 |  | 5.40 |  | 0.5846 |  | 2,828,465 |  |
| 2014 | 21,323,359.97 |  | 13.00 |  | 7.69 |  | 1,639,766.38 |  | 6.06 |  | 0.5339 |  | 11,383,476 |  |
| 2015 | 53,331,810.91 |  | 13.00 |  | 7.69 |  | 4,101,216.26 |  | 6.84 |  | 0.4739 |  | 25,271,279 |  |
| 2016 | 33,700,104.95 |  | 13.00 |  | 7.69 |  | 2,591,538.07 |  | 7.69 |  | 0.4085 |  | 13,765,145 |  |
| 2017 | 43,249,793.29 |  | 13.00 |  | 7.69 |  | 3,325,909.10 |  | 8.59 |  | 0.3392 |  | 14,671,627 |  |
| 2018 | 21,825,440.09 |  | 13.00 |  | 7.69 |  | 1,678,376.34 |  | 9.53 |  | 0.2669 |  | 5,825,646 |  |
| 2019 | 37,044,386.03 |  | 13.00 |  | 7.69 |  | 2,848,713.29 |  | 10.51 |  | 0.1915 |  | 7,095,482 |  |
| 2020 | 35,461,189.96 |  | 13.00 |  | 7.69 |  | 2,726,965.51 |  | 11.50 |  | 0.1154 |  | 4,091,512 |  |
| 2021 | 46,662,684.75 |  | 13.00 |  | 7.69 |  | 3,588,360.46 |  | 12.50 |  | 0.0385 |  | 1,794,647 |  |
|  | | | | | | | | | | | | | | |
|  | 406,416,668.26 |  |  | | | | 31,252,494.88 |  |  | | | | 162,690,911 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 7.69 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 9-L2.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1982 | 13,043.01 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 13,043 |  |
| 1985 | 4,944.85 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,945 |  |
| 1988 | 37,677.85 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 37,678 |  |
| 1990 | 127,235.42 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 127,235 |  |
| 1991 | 9,134.34 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 9,134 |  |
| 1993 | 95,581.62 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 95,582 |  |
| 1994 | 82,612.54 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 82,613 |  |
| 1995 | 40,396.41 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 40,396 |  |
| 1996 | 5,279.46 |  | 9.00 |  |  |  |  |  |  |  | 1.0000 |  | 5,279 |  |
| 1997 | 7,406.13 |  | 9.00 |  | 11.11 |  | 822.82 |  | 0.23 |  | 0.9744 |  | 7,217 |  |
| 1998 | 33,747.44 |  | 9.00 |  | 11.11 |  | 3,749.34 |  | 0.39 |  | 0.9567 |  | 32,285 |  |
| 2000 | 25,719.76 |  | 9.00 |  | 11.11 |  | 2,857.47 |  | 0.73 |  | 0.9189 |  | 23,634 |  |
| 2002 | 77,834.64 |  | 9.00 |  | 11.11 |  | 8,647.43 |  | 1.07 |  | 0.8811 |  | 68,581 |  |
| 2003 | 597,743.37 |  | 9.00 |  | 11.11 |  | 66,409.29 |  | 1.22 |  | 0.8644 |  | 516,713 |  |
| 2011 | 138,812.40 |  | 9.00 |  | 11.11 |  | 15,422.06 |  | 2.81 |  | 0.6878 |  | 95,472 |  |
| 2012 | 193,869.32 |  | 9.00 |  | 11.11 |  | 21,538.88 |  | 3.01 |  | 0.6656 |  | 129,032 |  |
| 2016 | 197,873.64 |  | 9.00 |  | 11.11 |  | 21,983.76 |  | 4.27 |  | 0.5256 |  | 103,994 |  |
| 2018 | 111,346.75 |  | 9.00 |  | 11.11 |  | 12,370.62 |  | 5.71 |  | 0.3656 |  | 40,704 |  |
| 2019 | 418,696.66 |  | 9.00 |  | 11.11 |  | 46,517.20 |  | 6.58 |  | 0.2689 |  | 112,583 |  |
| 2020 | 2,058,968.40 |  | 9.00 |  | 11.11 |  | 228,751.39 |  | 7.52 |  | 0.1644 |  | 338,577 |  |
| 2021 | 359,449.94 |  | 9.00 |  | 11.11 |  | 39,934.89 |  | 8.50 |  | 0.0556 |  | 19,971 |  |
|  | | | | | | | | | | | | | | |
|  | 4,637,373.95 |  |  | | | | 469,005.15 |  |  | | | | 1,904,668 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 10.11 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 20-S0.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1978 | 4,838.21 |  | 20.00 |  |  |  |  |  |  |  | 1.0000 |  | 4,838 |  |
| 1980 | 17,879.51 |  | 20.00 |  |  |  |  |  |  |  | 1.0000 |  | 17,880 |  |
| 1983 | 5,452.59 |  | 20.00 |  | 5.00 |  | 272.63 |  | 0.54 |  | 0.9730 |  | 5,305 |  |
| 1984 | 46,798.96 |  | 20.00 |  | 5.00 |  | 2,339.95 |  | 0.88 |  | 0.9560 |  | 44,740 |  |
| 1985 | 12,590.72 |  | 20.00 |  | 5.00 |  | 629.54 |  | 1.22 |  | 0.9390 |  | 11,823 |  |
| 1986 | 10,457.85 |  | 20.00 |  | 5.00 |  | 522.89 |  | 1.56 |  | 0.9220 |  | 9,642 |  |
| 1987 | 2,225.82 |  | 20.00 |  | 5.00 |  | 111.29 |  | 1.89 |  | 0.9055 |  | 2,015 |  |
| 1988 | 13,849.70 |  | 20.00 |  | 5.00 |  | 692.48 |  | 2.23 |  | 0.8885 |  | 12,305 |  |
| 1989 | 115,909.45 |  | 20.00 |  | 5.00 |  | 5,795.47 |  | 2.56 |  | 0.8720 |  | 101,073 |  |
| 1990 | 127,299.30 |  | 20.00 |  | 5.00 |  | 6,364.96 |  | 2.90 |  | 0.8550 |  | 108,841 |  |
| 1991 | 267,553.18 |  | 20.00 |  | 5.00 |  | 13,377.66 |  | 3.24 |  | 0.8380 |  | 224,210 |  |
| 1992 | 513,234.48 |  | 20.00 |  | 5.00 |  | 25,661.72 |  | 3.58 |  | 0.8210 |  | 421,366 |  |
| 1993 | 315,763.97 |  | 20.00 |  | 5.00 |  | 15,788.20 |  | 3.93 |  | 0.8035 |  | 253,716 |  |
| 1994 | 403,432.00 |  | 20.00 |  | 5.00 |  | 20,171.60 |  | 4.29 |  | 0.7855 |  | 316,896 |  |
| 1995 | 96,629.88 |  | 20.00 |  | 5.00 |  | 4,831.49 |  | 4.65 |  | 0.7675 |  | 74,163 |  |
| 1996 | 197,241.07 |  | 20.00 |  | 5.00 |  | 9,862.05 |  | 5.01 |  | 0.7495 |  | 147,832 |  |
| 1997 | 155,773.87 |  | 20.00 |  | 5.00 |  | 7,788.69 |  | 5.39 |  | 0.7305 |  | 113,793 |  |
| 1998 | 255,553.39 |  | 20.00 |  | 5.00 |  | 12,777.67 |  | 5.77 |  | 0.7115 |  | 181,826 |  |
| 1999 | 103,353.36 |  | 20.00 |  | 5.00 |  | 5,167.67 |  | 6.16 |  | 0.6920 |  | 71,521 |  |
| 2000 | 435,408.65 |  | 20.00 |  | 5.00 |  | 21,770.43 |  | 6.56 |  | 0.6720 |  | 292,595 |  |
| 2001 | 212,996.01 |  | 20.00 |  | 5.00 |  | 10,649.80 |  | 6.98 |  | 0.6510 |  | 138,660 |  |
| 2002 | 121,355.42 |  | 20.00 |  | 5.00 |  | 6,067.77 |  | 7.40 |  | 0.6300 |  | 76,454 |  |
| 2003 | 285,336.11 |  | 20.00 |  | 5.00 |  | 14,266.81 |  | 7.84 |  | 0.6080 |  | 173,484 |  |
| 2004 | 268,103.26 |  | 20.00 |  | 5.00 |  | 13,405.16 |  | 8.29 |  | 0.5855 |  | 156,974 |  |
| 2005 | 154,684.68 |  | 20.00 |  | 5.00 |  | 7,734.23 |  | 8.75 |  | 0.5625 |  | 87,010 |  |
| 2006 | 231,594.98 |  | 20.00 |  | 5.00 |  | 11,579.75 |  | 9.23 |  | 0.5385 |  | 124,714 |  |
| 2007 | 436,046.16 |  | 20.00 |  | 5.00 |  | 21,802.31 |  | 9.73 |  | 0.5135 |  | 223,910 |  |
| 2008 | 912,350.23 |  | 20.00 |  | 5.00 |  | 45,617.51 |  | 10.25 |  | 0.4875 |  | 444,771 |  |
| 2009 | 999,234.66 |  | 20.00 |  | 5.00 |  | 49,961.73 |  | 10.79 |  | 0.4605 |  | 460,148 |  |
| 2010 | 74,177.29 |  | 20.00 |  | 5.00 |  | 3,708.86 |  | 11.35 |  | 0.4325 |  | 32,082 |  |
| 2011 | 301,167.76 |  | 20.00 |  | 5.00 |  | 15,058.39 |  | 11.93 |  | 0.4035 |  | 121,521 |  |
| 2012 | 1,520,074.64 |  | 20.00 |  | 5.00 |  | 76,003.73 |  | 12.54 |  | 0.3730 |  | 566,988 |  |
| 2013 | 949,767.07 |  | 20.00 |  | 5.00 |  | 47,488.35 |  | 13.18 |  | 0.3410 |  | 323,871 |  |
| 2014 | 2,523,818.04 |  | 20.00 |  | 5.00 |  | 126,190.90 |  | 13.84 |  | 0.3080 |  | 777,336 |  |
| 2015 | 3,522,220.87 |  | 20.00 |  | 5.00 |  | 176,111.04 |  | 14.54 |  | 0.2730 |  | 961,566 |  |
| 2016 | 4,198,318.92 |  | 20.00 |  | 5.00 |  | 209,915.95 |  | 15.27 |  | 0.2365 |  | 992,902 |  |
| 2017 | 860,907.33 |  | 20.00 |  | 5.00 |  | 43,045.37 |  | 16.04 |  | 0.1980 |  | 170,460 |  |
| 2018 | 2,885,189.16 |  | 20.00 |  | 5.00 |  | 144,259.46 |  | 16.84 |  | 0.1580 |  | 455,860 |  |
| 2019 | 4,424,268.96 |  | 20.00 |  | 5.00 |  | 221,213.45 |  | 17.69 |  | 0.1155 |  | 511,003 |  |
| 2020 | 6,440,942.51 |  | 20.00 |  | 5.00 |  | 322,047.13 |  | 18.57 |  | 0.0715 |  | 460,527 |  |
| 2021 | 4,020,780.53 |  | 20.00 |  | 5.00 |  | 201,039.03 |  | 19.51 |  | 0.0245 |  | 98,509 |  |
|  | | | | | | | | | | | | | | |
|  | 38,444,580.55 |  |  | | | | 1,921,093.12 |  |  | | | | 9,775,130 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 5.00 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 13-L1.5 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1979 | 1,995.60 |  | 13.00 |  |  |  |  |  |  |  | 1.0000 |  | 1,996 |  |
| 1983 | 1,547.45 |  | 13.00 |  | 7.69 |  | 119.00 |  | 0.56 |  | 0.9569 |  | 1,481 |  |
| 1984 | 489.77 |  | 13.00 |  | 7.69 |  | 37.66 |  | 0.72 |  | 0.9446 |  | 463 |  |
| 1985 | 968.06 |  | 13.00 |  | 7.69 |  | 74.44 |  | 0.88 |  | 0.9323 |  | 903 |  |
| 1988 | 367.72 |  | 13.00 |  | 7.69 |  | 28.28 |  | 1.34 |  | 0.8969 |  | 330 |  |
| 1993 | 26,048.19 |  | 13.00 |  | 7.69 |  | 2,003.11 |  | 2.10 |  | 0.8385 |  | 21,840 |  |
| 1998 | 327,175.29 |  | 13.00 |  | 7.69 |  | 25,159.78 |  | 3.03 |  | 0.7669 |  | 250,917 |  |
| 1999 | 57,269.01 |  | 13.00 |  | 7.69 |  | 4,403.99 |  | 3.24 |  | 0.7508 |  | 42,996 |  |
| 2000 | 187,060.62 |  | 13.00 |  | 7.69 |  | 14,384.96 |  | 3.45 |  | 0.7346 |  | 137,418 |  |
| 2001 | 99,238.07 |  | 13.00 |  | 7.69 |  | 7,631.41 |  | 3.68 |  | 0.7169 |  | 71,146 |  |
| 2002 | 45,684.73 |  | 13.00 |  | 7.69 |  | 3,513.16 |  | 3.91 |  | 0.6992 |  | 31,944 |  |
| 2003 | 157,518.35 |  | 13.00 |  | 7.69 |  | 12,113.16 |  | 4.16 |  | 0.6800 |  | 107,112 |  |
| 2004 | 150,353.71 |  | 13.00 |  | 7.69 |  | 11,562.20 |  | 4.41 |  | 0.6608 |  | 99,349 |  |
| 2005 | 181,119.60 |  | 13.00 |  | 7.69 |  | 13,928.10 |  | 4.66 |  | 0.6415 |  | 116,195 |  |
| 2007 | 487,582.17 |  | 13.00 |  | 7.69 |  | 37,495.07 |  | 5.18 |  | 0.6015 |  | 293,300 |  |
| 2008 | 339,305.37 |  | 13.00 |  | 7.69 |  | 26,092.58 |  | 5.45 |  | 0.5808 |  | 197,058 |  |
| 2010 | 500,789.01 |  | 13.00 |  | 7.69 |  | 38,510.67 |  | 5.99 |  | 0.5392 |  | 270,040 |  |
| 2011 | 278,322.07 |  | 13.00 |  | 7.69 |  | 21,402.97 |  | 6.29 |  | 0.5162 |  | 143,656 |  |
| 2012 | 582,818.15 |  | 13.00 |  | 7.69 |  | 44,818.72 |  | 6.61 |  | 0.4915 |  | 286,478 |  |
| 2013 | 3,747.97 |  | 13.00 |  | 7.69 |  | 288.22 |  | 6.98 |  | 0.4631 |  | 1,736 |  |
| 2014 | 33,580.62 |  | 13.00 |  | 7.69 |  | 2,582.35 |  | 7.40 |  | 0.4308 |  | 14,466 |  |
| 2015 | 516,950.27 |  | 13.00 |  | 7.69 |  | 39,753.48 |  | 7.90 |  | 0.3923 |  | 202,805 |  |
| 2016 | 124,769.86 |  | 13.00 |  | 7.69 |  | 9,594.80 |  | 8.48 |  | 0.3477 |  | 43,381 |  |
| 2018 | 452,947.91 |  | 13.00 |  | 7.69 |  | 34,831.69 |  | 9.89 |  | 0.2392 |  | 108,359 |  |
| 2019 | 1,192,345.96 |  | 13.00 |  | 7.69 |  | 91,691.40 |  | 10.70 |  | 0.1769 |  | 210,950 |  |
| 2020 | 390,361.36 |  | 13.00 |  | 7.69 |  | 30,018.79 |  | 11.58 |  | 0.1092 |  | 42,639 |  |
| 2021 | 837,268.50 |  | 13.00 |  | 7.69 |  | 64,385.95 |  | 12.52 |  | 0.0369 |  | 30,912 |  |
|  | | | | | | | | | | | | | | |
|  | 6,977,625.39 |  |  | | | | 536,425.94 |  |  | | | | 2,729,870 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 7.69 | | | | | | | | | | |  | | |

| SURVIVOR CURVE.. IOWA 25-S2 | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | |
| 1982 | 2,596.84 |  | 25.00 |  | 4.00 |  | 103.87 |  | 2.07 |  | 0.9172 |  | 2,382 |  |
| 1985 | 20,382.66 |  | 25.00 |  | 4.00 |  | 815.31 |  | 2.77 |  | 0.8892 |  | 18,124 |  |
| 1987 | 12,299.37 |  | 25.00 |  | 4.00 |  | 491.97 |  | 3.28 |  | 0.8688 |  | 10,686 |  |
| 1988 | 21,271.21 |  | 25.00 |  | 4.00 |  | 850.85 |  | 3.55 |  | 0.8580 |  | 18,251 |  |
| 1989 | 140,358.41 |  | 25.00 |  | 4.00 |  | 5,614.34 |  | 3.83 |  | 0.8468 |  | 118,856 |  |
| 1992 | 3,079,183.25 |  | 25.00 |  | 4.00 |  | 123,167.33 |  | 4.73 |  | 0.8108 |  | 2,496,602 |  |
| 1993 | 307,150.88 |  | 25.00 |  | 4.00 |  | 12,286.04 |  | 5.06 |  | 0.7976 |  | 244,984 |  |
| 1994 | 225,056.45 |  | 25.00 |  | 4.00 |  | 9,002.26 |  | 5.40 |  | 0.7840 |  | 176,444 |  |
| 1995 | 124,455.05 |  | 25.00 |  | 4.00 |  | 4,978.20 |  | 5.76 |  | 0.7696 |  | 95,781 |  |
| 1996 | 2,585,664.51 |  | 25.00 |  | 4.00 |  | 103,426.58 |  | 6.14 |  | 0.7544 |  | 1,950,625 |  |
| 1997 | 530,414.50 |  | 25.00 |  | 4.00 |  | 21,216.58 |  | 6.54 |  | 0.7384 |  | 391,658 |  |
| 1998 | 765,950.78 |  | 25.00 |  | 4.00 |  | 30,638.03 |  | 6.95 |  | 0.7220 |  | 553,016 |  |
| 1999 | 827,066.88 |  | 25.00 |  | 4.00 |  | 33,082.68 |  | 7.39 |  | 0.7044 |  | 582,586 |  |
| 2000 | 2,035,644.48 |  | 25.00 |  | 4.00 |  | 81,425.78 |  | 7.86 |  | 0.6856 |  | 1,395,638 |  |
| 2001 | 1,201,073.00 |  | 25.00 |  | 4.00 |  | 48,042.92 |  | 8.34 |  | 0.6664 |  | 800,395 |  |
| 2002 | 829,867.98 |  | 25.00 |  | 4.00 |  | 33,194.72 |  | 8.86 |  | 0.6456 |  | 535,763 |  |
| 2003 | 209,805.94 |  | 25.00 |  | 4.00 |  | 8,392.24 |  | 9.40 |  | 0.6240 |  | 130,919 |  |
| 2004 | 559,629.13 |  | 25.00 |  | 4.00 |  | 22,385.17 |  | 9.98 |  | 0.6008 |  | 336,225 |  |
| 2005 | 368,129.34 |  | 25.00 |  | 4.00 |  | 14,725.17 |  | 10.59 |  | 0.5764 |  | 212,190 |  |
| 2006 | 1,304,872.26 |  | 25.00 |  | 4.00 |  | 52,194.89 |  | 11.23 |  | 0.5508 |  | 718,724 |  |
| 2007 | 557,959.39 |  | 25.00 |  | 4.00 |  | 22,318.38 |  | 11.90 |  | 0.5240 |  | 292,371 |  |
| 2008 | 1,436,286.94 |  | 25.00 |  | 4.00 |  | 57,451.48 |  | 12.62 |  | 0.4952 |  | 711,249 |  |
| 2009 | 1,926,333.54 |  | 25.00 |  | 4.00 |  | 77,053.34 |  | 13.37 |  | 0.4652 |  | 896,130 |  |
| 2010 | 854,710.35 |  | 25.00 |  | 4.00 |  | 34,188.41 |  | 14.15 |  | 0.4340 |  | 370,944 |  |
| 2011 | 415,973.23 |  | 25.00 |  | 4.00 |  | 16,638.93 |  | 14.97 |  | 0.4012 |  | 166,888 |  |
| 2012 | 2,173,046.85 |  | 25.00 |  | 4.00 |  | 86,921.87 |  | 15.83 |  | 0.3668 |  | 797,074 |  |
| 2013 | 1,110,497.79 |  | 25.00 |  | 4.00 |  | 44,419.91 |  | 16.72 |  | 0.3312 |  | 367,797 |  |
| 2014 | 2,921,269.08 |  | 25.00 |  | 4.00 |  | 116,850.76 |  | 17.63 |  | 0.2948 |  | 861,190 |  |
| 2015 | 1,652,212.06 |  | 25.00 |  | 4.00 |  | 66,088.48 |  | 18.58 |  | 0.2568 |  | 424,288 |  |
| 2016 | 3,171,182.99 |  | 25.00 |  | 4.00 |  | 126,847.32 |  | 19.54 |  | 0.2184 |  | 692,586 |  |
| 2017 | 6,785,675.56 |  | 25.00 |  | 4.00 |  | 271,427.02 |  | 20.52 |  | 0.1792 |  | 1,215,993 |  |
| 2018 | 9,456,178.31 |  | 25.00 |  | 4.00 |  | 378,247.13 |  | 21.51 |  | 0.1396 |  | 1,320,082 |  |
| 2019 | 7,688,958.29 |  | 25.00 |  | 4.00 |  | 307,558.33 |  | 22.50 |  | 0.1000 |  | 768,896 |  |
| 2020 | 7,681,209.61 |  | 25.00 |  | 4.00 |  | 307,248.38 |  | 23.50 |  | 0.0600 |  | 460,873 |  |
| 2021 | 15,010,281.83 |  | 25.00 |  | 4.00 |  | 600,411.27 |  | 24.50 |  | 0.0200 |  | 300,206 |  |
|  | | | | | | | | | | | | | | |
|  | 77,992,648.74 |  |  | | | | 3,119,705.94 |  |  | | | | 20,436,416 |  |
|  | | | | | | | | | | | | | | |
|  | COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 4.00 | | | | | | | | | | |  | | |