

## Formula Sheet

| No | Formula                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <b>Net Asset Value (NAV) = Assets – Liabilities</b><br><i>Assets</i> (value of underlying assets such as stocks, bonds, money market instruments based on market value, cash, dividend income and interest income)<br><i>Liabilities</i> (management fee, trustee fee, auditor fee, tax agent fee, brokerage fee, etc)                                                                                             |
| 2  | <b>Net Asset Value per Unit (NAV per Unit) = <math>\frac{NAV}{No. \text{ of units}}</math></b><br>Note: NAV per Unit is unit price (or fund price)                                                                                                                                                                                                                                                                 |
| 3  | <b>Working Money = <math>\frac{Capital}{(1 + service \text{ charge})}</math></b><br>Note: Working Money is net investment amount after deducting the service charge                                                                                                                                                                                                                                                |
| 4  | <b>Dollar Cost Averaging (DCA) = <math>\frac{Total \text{ Investment Amount}}{Total \text{ Units}}</math></b><br>Same formula for <i>Average Cost Per Unit (ACU)</i>                                                                                                                                                                                                                                               |
| 5  | <b>No. of units = <math>\frac{Investment \text{ Amount}}{NAV/U}</math></b>                                                                                                                                                                                                                                                                                                                                         |
| 6  | <b>EPF Member Investment Scheme (EPF-MIS)</b><br><b>Eligible investment amount = (Amount in Account 1 – Basic Savings) x 30%</b>                                                                                                                                                                                                                                                                                   |
| 7  | <b>Loan Financing</b><br><b>Loan-to-Valuation = 67%; Balance 33% own money (capital)</b>                                                                                                                                                                                                                                                                                                                           |
| 8  | <b>Ex-D NAV/U = Cum-D NAV/U – Distribution</b><br><small>(NAV/U after distribution) = (NAV/U before distribution) – distribution</small>                                                                                                                                                                                                                                                                           |
| 9  | <b>Unit Split</b> e.g.: 1:4 (for every 4 units holding by investors, will get additional 1 unit)<br>$NAV/U \times \frac{4}{5}$ (Note: <i>NAV/U</i> will adjust <i>lower</i> after the unit split)<br>$No \text{ of units} \times \frac{5}{4}$ (Note: <i>No of units</i> will <i>increase</i> proportionally after the unit split)<br><i>Total Investment Value</i> (before and after the unit split) = <b>SAME</b> |

|     |                                                                                                                                                                                                                                   |
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| 10  | <b>Raw Return</b> = $\frac{\text{End Price} - \text{Begin Price}}{\text{Begin Price}} \times 100\%$                                                                                                                               |
| 11a | <b>FV = PV ( 1 + i )<sup>n</sup></b><br>Where FV = Future Value, PV = Present Value, <i>i</i> = investment return or inflation, n = number of years                                                                               |
| 11b | To find <i>i</i> , formula = $\sqrt[n]{\frac{FV}{PV}} - 1$                                                                                                                                                                        |
| 11c | To find <b>PV</b> , formula = $\frac{FV}{(1+i)^n}$                                                                                                                                                                                |
| 12  | <b>Rule of 72</b> (applicable to investment amount double up)                                                                                                                                                                     |
| 12a | If number of years is given, solving for investment return (%) = $\frac{72}{\text{years}} = \%$                                                                                                                                   |
| 12b | If investment return (%) is given, solving for number of years = $\frac{72}{\%} = \text{years}$                                                                                                                                   |
| 13  | <b>Management Expense Ratio (MER)</b> = $\frac{\text{All Expenses}}{\text{Average Fund Size}} \times 100\%$<br>MER = Indirect cost<br>The lower the MER, means the UTMC/Fund Manager is more cost efficiency in managing the fund |
| 14  | <b>Fund's Effective Rate of Return after MER</b> = <b>Fund's Investment Rate of Return – MER</b>                                                                                                                                  |
| 15  | <b>Effective Rate of Return after tax and inflation</b> =<br><b>Investment Rate of Return – (Investment Rate of Return x <math>\frac{\text{Tax}}{100}</math>) – Inflation Rate</b>                                                |