Donors: How much do they give in a lifetime?

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Nigel Magson founded Talking Numbers Data based solutions Ltd under the Target Direct umbrella in 1996. Talking Numbers work with a number of commercial and nonprofit organisations in providing database consultancy and data analysis services. Prior to this Nigel spent many years working as an employee or consultant for British Gas developing database marketing within the industry and producing strategic marketing analysis. Nigel is a regular contributor to magazines and a speaker on database-related topics at conferences.

ABSTRACT
In a relational approach to fundraising, non-profit-making organisations have the task of developing profitable relationships with their supporters. This approach requires the definition of 'lifetime value' in order to assess its performance.

Yet the paradox of calculating a lifetime value is that the only accurate definition of any particular individual’s value can be made once they are no longer a donor — when they have died or have stopped giving. At this point they may appear of no use. However, it is by understanding past donors that present donors can be understood in terms of their existing and potential ongoing value.

This paper, building on recent debate and research within the sector, refers to the practicalities of creating and using not one, but a variety of measures from information sources that exist within such organisations. The paper specifically explores the way measures can be created and used. It raises a number of the practical issues involved in terms of accounting definitions and information availability. Understanding and using the value measures of supporters are key to ensuring that this relationship is dealt with in the most effective way for the organisation.

INTRODUCTION
This paper explores a number of areas:

— the reasons why an organisation seeks to create value measures
— the definition of different measures
— die practical applications and some of the pitfalls in building measures
— an approach to building information suites that will allow different applications within the organisation.

A donor's value can occur in a number of ways, and it is not necessarily easily defined as details of their relationship may be held in a variety of systems within an organisation, eg trading, raffle tickets, payroll giving, covenants etc. It should be remembered that the value of a donor is defined by accumulating these sources and the costs involved.

WHY CREATE MEASURES OF VALUE?

The creation of value measures is born out of an organisational necessity to establish existing and ongoing financial objectives and benchmarks. The concept of 'lifetime value' (LTV) tries to shift an organisation from a perhaps short-term view of value, which exists because of self-imposed and regulatory timeframes, eg the financial year, towards defining each customer or donor over their 'lifetime', which in many instances can be a considerably longer period.

This thinking in both commercial and nonprofit-making organisations stems from the concept of 'relationship marketing' or, as it is known in the voluntary sector, 'relationship fundraising', as epitomised in the book of the same name by K. Burnett. While fundraisers within organisations have understood the principle of trying to develop relationships with their donors and understand the longer 'lifetime' value of a donor or supporter to an organisation, there is a requirement to create measures to prove and assess this approach. The practical inability to create these measures leaves many organisations still pursuing and assessing marketing activity in terms of short-term goals and assessing campaigns on an individual basis.

The shortcomings of this approach mean that organisations tend to be campaign driven with techniques employed to maximise the return on investment (ROI) of any one campaign without necessarily any reference to the longer-term impact of such appeals. Urgent recruitment appeals such as those for famine, disasters or other crises may still benefit from this type of approach, which essentially seeks one-off donations. However, most fundraising activity relies on turning recruited donors into more committed supporters on a regular basis, and persuading them in the long term to leave a legacy to the organisation in their will.

Measures are therefore needed to understand which initial donors will become longer-term supporters and to answer the many questions that follow, such as:

— how long will they remain a supporter (their 'lifetime')?
— what will be the attrition rate of their support?
— how much are they likely to be worth over this 'lifetime'?
— which are the most effective contact strategies to retain them?
— which are the most effective recruitment strategies to acquire them?
— how to maximise the contact effort to those supporters who will bring the most benefit to the organisation?

DEFINING THE MEASURES

There are many attempts to define and create 'the definitive measure' for judging lifetime value. Given the sort of questions that can be legitimately asked about an organisation's supporters, this paper maintains that there can be a number of valid measures, which may be developed to gauge historic value and project future value to an organisation or a particular division of that organisation. There are a number of reasons for this: the need to account for different elements; to judge over different time periods, or by different segments; or to compensate for data absence or deficiencies. See Table 1, which describes some measures and components. These terms may be different from conventional definitions.

In practical terms an example will illustrate this point. Many organisations separate the roles of recruitment of new donors from their ongoing development once they have become a donor. Very often
the recruitment methods that appear to be best at persuading people to give a one-off donation will not attract the people who will become committed to the charity's cause over time. Yet their initial assessment, including recruitment costs, might lead to a strategy or media source with very high ongoing attrition. So should the recruitment cost element be excluded from a value calculation? When analysing an emergency charity's lapsed and reactivated donor base a high correlation between the

<table>
<thead>
<tr>
<th>Value measure term</th>
<th>Definition</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross donation value</td>
<td>All income generated to date from a donor</td>
<td>A gross historic count of all income to date by donor</td>
</tr>
<tr>
<td>Annual average donation value</td>
<td>The average gross income generated per annum</td>
<td>The average gross income by year, useful to see change in behaviour</td>
</tr>
<tr>
<td>Net current lifetime value</td>
<td>The GNV less the cost of recruitment and communications</td>
<td>The historic actual value before discounting, ie to a current point in time</td>
</tr>
<tr>
<td>Net current real lifetime value</td>
<td>The net LTV which has been factored to allow for the net present value of money</td>
<td>For instance, £10 given 10 years ago is worth more in real terms than £10 given today due to effects of inflation</td>
</tr>
<tr>
<td>Annual average net lifetime value</td>
<td>The average annual net income</td>
<td>The average net income by year, which can be used in conjunction with annual average gross income to assess marketing effectiveness</td>
</tr>
<tr>
<td>Recruitment cost</td>
<td>The cost of initially recruiting an individual to an organisation. This is a response cost calculated by dividing campaign costs by number of new recruits.</td>
<td>It is usual to maintain just one recruitment cost, and use warm substitution costs where a second response is made to a recruitment medium</td>
</tr>
<tr>
<td>Communication costs</td>
<td>The ongoing variable marketing cost of communicating with a donor once recruited</td>
<td>These may include newsletters, upgrades, telemarketing but not fixed overhead</td>
</tr>
<tr>
<td>Warm substitution cost</td>
<td>The cost attributed to an individual donor who has responded to a cold recruitment exercise</td>
<td>This is calculated by taking the average communication cost to a group of donors. This is needed to create fair comparisons between donors and contact strategies.</td>
</tr>
<tr>
<td>Cost smoothed LTV</td>
<td>The net LTV calculation which has had the recruitment cost smoothed to remove large fluctuations within particular media.</td>
<td>Where there are wild differences in recruitment by a particular media, these can be smoothed to allow more reasonable allocation of cost.</td>
</tr>
<tr>
<td>Discount rate</td>
<td>The rate that is used to bring past donations and projections of future values to a net present value</td>
<td>This rate will vary according to year historically. Forward projections can be done on different rates.</td>
</tr>
<tr>
<td>Attrition rate</td>
<td>The rate at which particular donors are likely to stop giving</td>
<td>This can be calculated at individual, segment or file level. At individual level it is a propensity score.</td>
</tr>
</tbody>
</table>
In the definitions of elements that can be used in the area of 'lifetime value' described in Table 1, distinctions can be drawn between whether historic, ie actual value to date, or predicted value over a defined period in the future is meant. These are two quite different propositions. People who have been worth a particular amount of revenue to an organisation will have contributed a certain value; determining whether they will continue to be worth the same, more or less, is the subject of 'predicted' values. In order to understand what people will be worth, projections will need to be based on past information.

In an effort to describe and pinpoint which measure is being discussed or being used, the concept of the 'donor value cube' has been developed. The cube allows different value measures to be plotted and shows the interrelationship between the three different factors: time — actual and predicted; individual or donor segment; and at a single or grouped campaign level. (See figures.)

In Figure 1 the donor value cube plots a historic measure built at an individual level over the last two years for all campaigns received. This is typically the sort of measure that may be built periodically to compare the performance of individual donors over time to monitor value change at individual and file level. The second cube figure (Figure 2) shows the position of a measure examining the value of a section of donors (older couples) recruited from broadsheet advertisements for a period of time to date. This sort of measure is more specific and may be designed to allow a comparison of different campaign types for certain donor segments within the file. In this instance, perhaps allowing the comparison between different media recruitment methods for a specific donor segment.

In the following sections the issues involved in calculating historic and predicted lifetime values are explored.

**ACTUAL VALUE MEASURES**

This section explores the issues and practicality of building historic value measures and what answers they can provide using actual information.

Before starting any exercise to create value measures, as full an understanding of the data as possible should be obtained through conducting a data audit. A data audit is a review of every field held within a system to examine its population and the accuracy of the information held within. For instance, many organisations that have captured the date of birth of their donors have failed to create an accurate date, which moves with time. Consequently, information that could have been useful has become redundant. A data audit will provide a health check on the state of the information held within a system.

Similarly, many organisations change their systems periodically and fail to keep certain historic information (particularly cost information), which will be important in the creation of measures. While there is no such thing as perfect information, provided deficiencies are recognised allowances can be made within calculations. It is partly for this reason that the approach is to start with building basic measures and calculations, then to seek to refine them.
HOW MUCH HAVE AN ORGANISATION'S DONORS BEEN WORTH?

In order to take a quick view of a file's historic value, the following approach can be taken. One relatively simple measure to build is the historic net LTV, i.e., the gross donation value less the costs of recruitment and communication. In an 'actual or historic LTV the aim is to get as accurate an estimation as possible of the costs and income for a particular donor or donors at
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different giving levels. This will include all costs and income that can be attributable directly to a specific donor or donors.

The general formula for calculating an actual net LTV can be described as follows:

Gross Donation Value — Cost of Recruitment and Cost of Ongoing Communications

In principle, this seems to be straightforward. It does make a number of assumptions. For instance, it treats all donors as having a single point of recruitment and thereafter being subject to a set of ongoing communications designed to generate income. This view of a single recruitment point and then an ongoing maintenance cost per donor will not suit every type of organisation.

At this stage the above formula does not use a discount rate, which would normally be applied dependent on the number of years the analysis covers. There is another accounting difference to point out between the two cost elements. This difference leads to many formulations to exclude the recruitment cost. As can be seen below, the calculation of a recruitment or response cost apportions the cost of a campaign only among those donors who respond. Whereas a communication cost allocates variable costs over all recipients of an activity, irrespective of whether they respond or not.

Recruitment cost =
\[
\frac{\text{Campaign costs}}{\text{No. of responses}} = \text{£10k}
\]

Communications cost =
\[
\frac{\text{Campaign costs}}{\text{No. of recipients}} = \text{£0.50}
\]

that initial recruitment cost is likely to be the largest and most variable cost element. Different media or tests may recruit new donors at vastly different rates. If someone is recruited at a cost of £100 whereas another person has been recruited at £10, the first recruit will need to produce a lot more income to break even in this calculation. This may mean that the calculation of recruitment costs is modified or 'smoothed' to take account of these wide fluctuations. An analysis of broad recruitment media, for instance, may decide to take the mean recruitment cost by year for donors recruited by tabloid or broadsheet press. This will allow a more meaningful value comparison at this level. For this reason, the cost of recruitment can be held as a number of separate fields. These fields can be used to form different calculations that could allow a comparison of recruitment performance when combined with media categories, or would allow its exclusion from a formula where just the ongoing costs are used to understand performance of contact strategies after recruitment.

Since the world is not perfect, and existing donors do respond to recruitment appeals, this needs to be allowed for in creating measures accurately to reflect different contact strategies. If two recruitment costs are appended to a donor, this would make them appear particularly poor value in comparison to a conventional donor recruited once, and subsequently responding to 'donor' activity. One solution to subsequent contribution to recruitment activity can be handled by a calculation called 'warm substitution'. This will substitute a typical communication cost so that a fair comparison can be made of the donor's value over time.

Although this may appear initially simple, the exercise of creating the measure will inevitably bring a closer understanding of the information. This
Table 2: Summary lifetime value statistics

<table>
<thead>
<tr>
<th>Calculated fields</th>
<th>N</th>
<th>Sum</th>
<th>Avg</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net lifetime value</td>
<td>50,000</td>
<td>£2,085,000</td>
<td>£41.70</td>
<td>£-25.33</td>
<td>£870.62</td>
</tr>
<tr>
<td>Gross donation value</td>
<td>50,000</td>
<td>£3,062,500</td>
<td>£61.25</td>
<td>£1.00</td>
<td>£907.65</td>
</tr>
<tr>
<td>Cost of recruitment</td>
<td>50,000</td>
<td>£977,500</td>
<td>£19.55</td>
<td>£14.66</td>
<td>£35.33</td>
</tr>
<tr>
<td>Ongoing cost of comms</td>
<td>50,000</td>
<td>£514,250</td>
<td>£10.30</td>
<td>£0.55</td>
<td>£23.65</td>
</tr>
<tr>
<td>Total no. of comms (includes recruitment)</td>
<td>50,000</td>
<td>935,000</td>
<td>18.7</td>
<td>1</td>
<td>43</td>
</tr>
<tr>
<td>Total no. of donations</td>
<td>50,000</td>
<td>175,000</td>
<td>3.5</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Response ratio (dons/comms)</td>
<td>50,000</td>
<td>-</td>
<td>0.10</td>
<td>0.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

LTV AND RECRUITMENT ANALYSIS

Recruitment analysis is most regularly conducted at a single campaign level, where individual recruits are examined according to the source and creative appeal used to gain their recruitment. This is 'point-based' evaluation and makes an assessment of the campaign's performance by calculating initial ROI, cost per recruit figures. Quite often recruitment campaigns will attract high levels of anonymous donations and gifts from existing supporters (particularly when using a non-personalised medium). These campaigns may be ranked on the levels of 'unprompted' income.

While point-based analysis is useful in assessing individual campaigns, it often disguises the real and ongoing value of donors, and can lead to recruitment budgets being misdirected to get the best initial performance. In Table 3 the lifetime value of donors of a medical research charity recruited via particular media can be seen. The entire file of the charity was processed for the respective year and medium. Reciprocals can be seen to have the lowest initial value, but actually had the highest number of subsequent donations and longest lifetime measured in months. For each year of recruitment within each medium the

approach seeks to create a suite of value information held about each donor, which can be used to build more complex calculations. Table 2 shows a summary table generated containing this type of information. This table shows calculations performed on a historic set of charity data. An initial view shows that there is a significant spread of historic value from a minus £25 to a desirable £870. The average value is just short of £42. While the averages are useful to give a guide to particular measures, they do not show the general spread of the data, which is normally shown by calculating the standard deviation. The spread of the minimum to maximum values for different measures starts to show how wide is the difference between the most and least valuable donors on the file. Within the table the number of communications and donations has been summarised. These were calculated for each donor and ratios produced. The response ratio starts to show how 'mail responsive' particular donors are by relating the number of communications sent to donations received. It is important to use this in conjunction with a value measure to understand the opportunities that any particular donor may have had to contribute to the organisation.
### Table 3:

<table>
<thead>
<tr>
<th>Year of Recruitment</th>
<th>Mean Value of First Donation</th>
<th>Mean Value of Subsequent Donations</th>
<th>Lifetime of Single Donors (months)</th>
<th>Lifetime of Multi-donors (months)</th>
<th>Average Number of Donations</th>
<th>Average Number of Donations After First Donation</th>
<th>Time to Break Even (months)</th>
<th>Cross Lifetime Value</th>
<th>Profit</th>
<th>Cost per Recruit (gross)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold mail 1992</td>
<td>£15.69</td>
<td>£18.54</td>
<td>16.33</td>
<td>31.04</td>
<td>2.62</td>
<td>3.09</td>
<td>13.5</td>
<td>£45.50</td>
<td>£14.35</td>
<td>£23.27</td>
</tr>
<tr>
<td>1993</td>
<td>£15.67</td>
<td>£19.75</td>
<td>13.69</td>
<td>28.85</td>
<td>2.54</td>
<td>3.23</td>
<td>15.5</td>
<td>£44.40</td>
<td>£10.10</td>
<td>£22.28</td>
</tr>
<tr>
<td>1994</td>
<td>£16.27</td>
<td>£19.11</td>
<td>10.81</td>
<td>20.69</td>
<td>2.18</td>
<td>2.27</td>
<td>22.0</td>
<td>£37.19</td>
<td>£4.18</td>
<td>£26.20</td>
</tr>
<tr>
<td>1995</td>
<td>£15.91</td>
<td>£17.66</td>
<td>6.00</td>
<td>13.50</td>
<td>1.86</td>
<td>1.94</td>
<td>15.5</td>
<td>£30.57</td>
<td>£1.84</td>
<td>£23.81</td>
</tr>
<tr>
<td>Door to door 1995</td>
<td>£18.07</td>
<td>£20.87</td>
<td>6.60</td>
<td>14.87</td>
<td>1.83</td>
<td>1.87</td>
<td>14.5</td>
<td>£34.60</td>
<td>£3.58</td>
<td>£25.16</td>
</tr>
<tr>
<td>Reciprocals All</td>
<td>£11.20</td>
<td>£12.44</td>
<td>21.30</td>
<td>33.90</td>
<td>3.34</td>
<td>3.72</td>
<td>0.0</td>
<td>£39.54</td>
<td>£28.15</td>
<td>£3.47</td>
</tr>
</tbody>
</table>
lifetime of single and multi-donors has been calculated.

For media effectiveness evaluations, single campaigns can also be misleading as many other factors can affect performance and return. To overcome fluctuations in campaign costs -within media types, it is possible to produce 'cost-smoothed LTVs'. These aim to collect income accurately against donor or donors, but would smooth recruitment costs to allow for 'freak' ie very high recruitment costs, which will occur from time to time. This would allow a 'fairer' view of a donor's take-on cost, and therefore will generally bring down the time taken to break even.

**LTVs AND ONGOING CONTACT STRATEGY ANALYSIS**

By excluding recruitment costs, measures can be created that can be used to evaluate the performance of different contact strategies. This will depend on whether it is possible to classify and differentiate between different strategies. In practical terms there must be a good administrative and database management discipline and coding must be well maintained.

In Figure 3 an analysis of this charity's database reveals communications history against net lifetime value, and shows the spread of profitable and unprofitable donors in terms of total communications sent and gifts received. In the bottom right hand corner, larger numbers of negative value donors can be seen, whereas in the top left, where donors have received and given more, they have moved to a positive value. This is another way of visualising value relative to opportunities to give and can be generated for specific periods of time. This will show specific movements within the file, and improvement or deterioration in ongoing value.

There are many tactical applications of measures, not only in defining and measuring specific contact streams, but also in aiding in selections and other aspects of fundraising, such as helping to determine 'ask' or prompt points for donation levels.

This latter point is a key element in a donors lifetime value and in formul-
ing an ongoing contact strategy. Ask or prompt points are often determined from the value of last donation, which can in fact completely ignore previous giving history and send the wrong signal to a donor. For instance, an uncharacteristically high or low donation will result in an inappropriate ask point next time. There are different ways of overcoming this — using a median or modal value calculated over a recent period of time is better than using an average donation figure.

However, it is possible to become more sophisticated and to understand when raising ask points becomes counter-productive by in fact reducing frequency of donations. This can be done by writing back to the database for each communication sent to the ask point against the mailing code, and calculating difference fields at the donation level. By summarising these fields and understanding this against giving and ask points through time-sliced matrices, it is possible to understand for whom raising ask points is still worthwhile. This is the equivalent of the card game 'twist', where the odds of taking another card to increase the score will raise the overall LTV or impact negatively.

**FUTURE VALUE MEASURES**

*How much will donors be worth?*

Perhaps this question is the one every marketer would really like to know. Yet until an attempt has been made to understand how much donors have been worth over a period of time, it will be difficult to pull out the proverbial crystal ball and gaze into the future.

The creation of predicted lifetime values is based to a large extent on past performance, because that is where the data exist. There are a number of ways of trying to calculate or create a score for each donor or segment — the accuracy of this can be judged historically using statistical techniques, but like any modelling will contain inaccuracy. Contrast this with the possibility, perhaps only theoretical, that actual LTVs can be built completely accurately.

In terms of the donor cube there are still different levels that can be calculated within a predictive view. For instance, calculating the likely value of the file in one year's time, which will seek to establish general levels of giving and attrition within the file. This is not necessarily difficult to estimate given certain assumptions about ongoing mailing and recruitment programmes, and, would probably form part of standard annual income forecasts.

**Individual donor value forecasting**

This global vision of where income is likely to come from and how much is likely to be generated is part of the business plan of most organisations. The difficulty comes when one tries to push this vision down to individuals or even segments within the customer file. The key to a predicted LTV model is to forecast how many times a donor is likely to give.

To calculate an individual's total predicted lifetime value two main pieces of information are required:

|—what is a donor's current behaviour? |
|—what is the donors likely future behaviour? |

If a donor gives a gift at time $t$, this may be the first gift or the last gift, and there are a number of routes the donor can take in the future. Unfortunately for most charities, the most likely action is not to give again. However, it is possible that the donor will give a second or subsequent time, will take out a deed of covenant or do both in the future (see Figure 4).
At the initial gift point \( t \), some information exists to allow modelling and prediction. This would include factors such as:

- initial gift value
- payment method
- recruitment source and creative treatment
- address, including postcode
- gender of donor (this can be deduced from name or title)
- date of gift

Experience has shown that this information is rarely sufficient to predict a useful or reliable future value of the new donor by itself. For instance, the value of the initial donation is frequently linked with the suggested gift prompt. For this reason there tends to be little difference between the size of donation and the propensity of a donor to give over time. Donors can pay by a number of different methods: cheque, credit card, cash etc. The method of payment can be useful in distinguishing between different types of donor. The type of recruitment campaign: door-drop, reciprocal or cold mailing, may give an indication of whether a donor will give again. People recruited by reciprocals tend to be a good group when examining donors who will give again.

However, if a welcome questionnaire is used to collect other behavioural and demographic information such as age, income and behaviour, then the accuracy can be improved. External information can also be linked to a donor via their postcode, such as geo-deinographic data, financial information etc. At \( t + 1 \) or each time an additional gift is given, further information accumulates and the accuracy of forecasting the future value improves.

In order to forecast a value what needs to be calculated is:

- how many times a donor is likely to give in the future, given their past history
- the time between second and subsequent gifts
— the likelihood that the donor will become a committed giver, leave a legacy or take out a deed of covenant.

This type of LTV is complex to produce and invariably requires the addition of external data sets to allow a forecast based on past value to take place. In order to judge likely future value, past levels of attrition and value over defined periods of time will need to be calculated. A score can then be assigned to judge where a donor or segment may move in buying or giving terms in the immediate future. The further ahead that predictions are made the more inaccurate they are likely to become.

CASE STUDY - PREDICTIVE MODEL
A recently created model developed by Talking Numbers for a medical charity used 29 different elements, made up of factors and scores created from a historic data set, to predict likely future value of new donors.

The model created six scores or groups, which indicate the relative likelihood of a donor going on to become a good giver — with 1 as the lowest likelihood, and 6 the highest. In order to understand the predictive power of the model, it is tested on historic information, which has been split by year of recruitment. The donors in group 6 tend to give more often than those in the lowest groups. This does not mean that donors in the lowest groups do not give more than once, it just means that people in this group are less likely to do so.

One of the complexities in building a propensity model such as this, is the fact that the model tends to be non-linear in nature. That is, there is no simple linear correlation between number of donations and variables such as a donor's income. As income levels change there is no commensurate change in giving levels. Donors with specific income bands may be more likely to give more often than those in other income groups.

This model, therefore, concentrates on grouping people by the number of gifts given, not on the value of each gift. Analysis has shown that people who give most often tend to give less each time. This is especially true for older people who give frequently, but at lower levels.

However this has meant that the model has been designed to be 'one-dimensional' in nature, ie one fixed calculation has to be made to describe the donor's score. A marginally more accurate model would have allowed for the multi-dimensional nature of the functions created and described their intersections and boundaries in n-dimensional space. Given that functions created for a model have a declining level of power, this did not affect the model's predictive power unduly. The example below tries to explain the difference between one- and multi-dimensional models.

\[
F_n = a_1 x_1 + a_2 x_2 + \ldots + a_n x_n
\]

Rather than

\[
F_n(1) = a_1 x_1 + a_2 x_2 + \ldots + a_n x_n
\]

\[
F_n(2) = b_1 x_1 + b_2 x_2 + \ldots + b_n x_n
\]

\[
F_n(3) = c_1 x_1 + c_2 x_2 + \ldots + c_n x_n
\]

\[\ldots\]

\[
F_n(n) = z_1 x_1 + z_2 x_2 + \ldots + z_n x_n
\]

In general \(n - 1\) functions are required to describe \(n\) groups. The number of groups which this model was trying to predict was up to six, and so five equations would have been required.

Mean number of donations by year and propensity group

The model distinguishes between donors who have given only once and those who
Table 5: Cumulative percentage of donors if groups are combined

<table>
<thead>
<tr>
<th>Category</th>
<th>6</th>
<th>56</th>
<th>456</th>
<th>3456</th>
<th>23456</th>
<th>123456</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996 one only</td>
<td>27.7%</td>
<td>42.8%</td>
<td>49.9%</td>
<td>57.7%</td>
<td>73.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>1996 two</td>
<td>30.5%</td>
<td>45.3%</td>
<td>53.4%</td>
<td>60.0%</td>
<td>75.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>1996 three plus</td>
<td>37.9%</td>
<td>54.7%</td>
<td>61.5%</td>
<td>67.6%</td>
<td>80.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>1996 Total</td>
<td>29.3%</td>
<td>44.5%</td>
<td>51.7%</td>
<td>59.1%</td>
<td>74.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The purpose of this score was partly strategic and partly tactical — future income forecasts could be made, while the communications programme could be tailored to donors with different scores. Those with the lowest scores would receive fewer, perhaps cheaper communications. There is clearly a danger that this may become a self-fulfilling prophecy and the organisation is therefore testing the scores.

This type of model allows an allocation of an LTV value calculation to those falling within different propensity groups. By using this figure it is possible to allow ongoing monitoring and an expectation of the numbers of donations that could be typically expected from this type of donor. The score and therefore value allocated to...
have given three or more times. A range of scores was calculated and donors assigned to groups, depending on their relative score. Table 4 shows the mean number of donations by year and propensity group. It can be seen that the lowest numbers of donations are in the lowest groups. The largest tend to be in the higher groups. This is best seen in the graph shown in Figure 5.

**Cumulative predictive power by year and propensity group**

Table 5 shows the cumulative percentage of donors included if the groups are combined. The table and graph (Figure 6) show what percentage of the group total is included. For example, almost 55 per cent of all donors who gave three plus times are in the top two categories.

The distribution of donors and balance between propensity groups show the model to have an increasing, but fairly even, pull among the groups.

The model does not produce a set of rules, which classifies all multi-gift donors in one group and all single-gift donors in another. Such a model would be virtually impossible to create, given the data available at first donation. What the model
each donor is not static. Scores would be updated over time depending on future behaviour.

**SUMMARY**

This paper is designed to help expose some of the uses of, issues connected with, and possible definitions of LTVs. There are practical uses of value measures and they can have positive applications for different organisations. At the same time, they can be difficult to define, calculate and use effectively.

In exploring some of the measures and issues in creating them, it has been seen that a definition of donor value will change according to the standpoint of the organisation and the intended application. Understanding how best to recruit donors and who will prove valuable in the long term, will require different definition and calculation to understand how to develop contact strategies to lift the lifetime value of current donors. Similarly, trying to predict who will continue to give, who might lapse, who will leave a legacy at an individual level requires a different set of rules, techniques and thought processes.

Finally, while value measures are mandatory for anyone seeking to aspire to a relationship fundraising approach, fundraising organisations realise they do not always need to define their donors or supporters in monetary terms. Quite often support is avoided in many different ways, such as giving time or resources to fundraising events. This should not be forgotten in the quest for defining ‘value’ in monetary terms or using such measures to direct communication strategies.

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**REFERENCES**


**FURTHER READING**