# What Makes Wealth Grow? A Wealth Sensitive Financial Statement Analysis 

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Wealth growth opportunities are difficult to observe using traditional financial statements. In this case study, an analysis using a wealth-sensitive balance sheet and income-expense statement is presented to help identify corrective adjustments that promote wealth growth. Adjustments involve the application of straightforward financial practices such as paying off debt, living within means, saving and investing $10 \%$ of earned income, re-investing all investment income, and converting excessive depreciating assets into wealth producing assets. The analysis also includes an estimate of the direction and magnitude of wealth growth change that is likely to occur from taking a set of proposed corrective adjustments.

Key Words: financial statements, wealth growth, consumer lifestyle

## Introduction

Walking back to my office I couldn't help feeling pleased. I was just returning from a wealth growth seminar presented by my upper division finance students. The students had done well; applying an integrated financial statement analysis, they had demonstrated how the Dover family could triple their annual rate of wealth accumulation in preparation for retirement. This was indeed a remarkable insight for the Dovers. Only ten years from retirement, these recommendations could dramatically change the landscape of their golden years. But the real pleasure I felt was for my students; their learning had increased. Their progress was especially meaningful considering that in the first week of class, when introduced to this case problem, their only recommendation for enhancing wealth growth was to invest part of the grocery money and the entire clothing budget to that end.

Wealth growth for retirement or other purposes has been an academic topic of interest for over a century. Family economic success was identified by Kinley (1911) in terms of five objectives: pursing maximum earnings and wealth, practicing efficient consumption, finding life satisfaction, reaching financial security, and accumulating wealth for retirement or for heirs. Since the time of Kinley, these objectives have been taught in one form or another (Muskie \& Winter, 2004).

Monetary resources flow in and out of the household economy. Early in that economy life cycle savings out of
earned income is a primary source of wealth accumulation. As Israelsen (2010) has further observed, we do not control the stock market or the economy; instead the wealth we accumulate is most likely to be determined by how well our long term investment portfolio is funded; we must save and invest (Israelsen, 2010). In today's high-tech world there is a great deal of information regarding wealth accumulation. However, much of it is misleading, biased, and self-serving. The information explosion accommodated through technology advances, with all of its advantages, has placed financial markets in flux and continuous transition. At a time like this, the basics of a sound financial foundation should not be overlooked. The role of savings, investing, and monitoring with information available in basic balance sheet and incomeexpense statements continues to be a valuable source of decision-information in the creation of wealth.

Nearly three decades ago, a colleague and I co-authored a paper on wealth growth within the context of the employed or wage earner household (Jenkins \& Beutler, 1984). That early work was the catalyst for my enduring interest in the topic of wealth growth and how it occurs over a generation of family life. In that early paper, the sources and paths of household wealth accumulation were explained via algebraic equations. The approach illustrated here demonstrates how a given family's wealth can grow and be enhanced through adherence to simple financial practices.

[^0]Having learned from experience how important it is to help students realize how wealth grows, I began my instructional unit with an assignment to review a case problem, create a traditional balance sheet and I \& E statement, and then indicate the financial strengths and weaknesses revealed in the review of these statements. Assembling the traditional financial statements was straightforward for the students, but their analysis was erroneous because they had not yet learned the importance of keeping finances simple and consistent with basic wealth growth principles. Not knowing these principles, they had little if any chance of recognizing the wealth growth potential hidden in the numbers or the financial policies they might have recommended to effect enhanced wealth growth. I learned that memorizing a list of wealth growth principles had little instructive value to the student and would be forgotten before the end of the semester. What became apparent over time was that to gain understanding, students needed to study cases, practice applying principles to those cases, and develop skills to demonstrate the wealth growth that would follow their applications.

This study introduces a wealth sensitive integrated financial statement that demonstrates a side-by-side analysis of the balance sheet and income-expense statement, followed by an evaluation of the financial practices needed to accelerate wealth growth. This wealth growth analysis provides a methodology that helps identify corrective adjustments. These adjustments involve the application of simple financial practices that avoid high powered or creative financing. As will be shown, this approach increased annualized wealth growth from $\$ 23,000$ to $\$ 72,000$ for the higher income Dover Case, and from $\$ 10,000$ to $\$ 24,000$ for the more moderate income Jensen Case (Appendix D).

Taking a family strengths perspective, this paper considers the financial situation and practices of the hypothesized Dover family, a high-income family that like many Americans has developed tastes for a consumer lifestyle. With ten years until retirement, they have less than one year's income set aside for that purpose.

## Literature Review

This study draws on a perspective from the family strengths literature as articulated in the work of DeFrain, Stinnett, and colleagues (Skogrand, Johnson, Horrocks, \& DeFrain, 2011; DeFrain \& Asay, 2007; DeFrain \& Stinnett, 2002). The focus is on the strength of families and what they can uniquely and individually do to make progress. Rather than taking a deficit perspective that explains why people fail, the strengths
perspective taken here emphasizes what individuals and families can do to move forward and help others to prosper at the same time.

In this review, attention is given to financial practices and household variables associated with wealth growth. These variables act together like instruments in a large orchestra. No single instrument can carry the performance alone; to tell the whole story and produce a rich and robust sound, the instruments must work in concert. Such is the case with household variables and wealth growth. Acting alone, none of the variables can achieve maximum success: Each variable adds a dimension that builds upon the other, and if properly applied, helps to accelerate the outcome.

Income is the first wealth growth variable. Most individuals and families depend on earned income for their source of revenue. Non-entrepreneurial families who live off earned income need to save money out of their earned income so that they can have money to invest. Higher income is associated with accelerated wealth growth (Baek \& DeVany, 2004; Yao et al., 2002; Moon, Yuh, \& Hanna, 2002). Higher family income increases the likelihood of discretionary income, allowing more potential for accumulating savings and investments. Huberman, Iyengar, and Jiang (2007) found that an increase in financial compensation resulted in increased participation rates in IRAs, contributions, and savings.

Education, work, and industry are variables frequently associated with wealth growth (Yao et al., 2002; Moon et al., 2002). In Baek and DeVaney's work (2004), having a college education correlated with other variables associated with wealth growth, such as earning a higher income, always paying off credit card balances, saving regularly, and spending less than one's income. Typically, during years of intensive education and preparation for a career, invitations to live a consumer lifestyle should be resisted. Years of career earnings should be years of wealth accumulation, years of positive saving and investing out of earned income. Stanley and Danko (1995) reported that frugality is the cornerstone of wealth building among millionaires, and that most people who build wealth in America are used to a lifestyle of hard work, discipline, sacrifice, thrift, and sound investment habits. Being frugal provides these individuals with the dollar base to invest.

Higher levels of wealth growth are associated with strong and successful marriages (Sanders \& Porterfield, 2010). According to Skogrand et al. (2011), "great marriages" were those where decision making, responsibility, and family
work were shared. Three themes with implications for wealth growth emerged from their data. First, for most couples, one partner acted as a manager, handling the day-to-day finances. This required trust and effective communication between spouses. Additional research indicates that couples with "great marriages" trust each other with money and are able to communicate effectively about financial matters, such as checking account management, investment decisions, and planning for retirement (McConocha \& Tully, 2001; Stanley, Markman, \& Whitton, 2002). A second finding from the Skogrand et al. study (2011) was that the couples had little or no debt or had a goal of paying off debt. Third, the couples lived within their means and were frugal.

Issues around money can be especially controversial. Tensions regarding budgeting and debt have been reported to lower marital satisfaction and wealth growth (Bryant, Taylor, Lincoln, Chatters, \& Jackson, 2008). Olson and Olson-Sigg (2000) reported that debt was a top-five financial stumbling block in marriage in their study of over 21,000 couples. Consumer debt, such as automobile and credit card debt, is negatively related to marital satisfaction (Skogrand et al., 2005). Although financial education can help couples increase marital satisfaction, Muskie and Winter (2001) observed that only a minority of couples actually implemented the financial practices that improve couple relationships.

Debt is not only problematic in terms of wealth growth among married couples; it is also problematic among college students, not only in terms of wealth growth, but also other life choices that affect prosperity. In 2009, a survey among undergraduate college students found that $84 \%$ of the participants possessed one or more credit cards. More troubling in that report was that $82 \%$ of the students surveyed carried a credit card balance that averaged $\$ 3,173$ (Sallie Mae, 2009). Keeping a credit card balance of more than $\$ 1,000$ is associated with risky credit behavior and other unhealthy behaviors, such as eating poorly, abusing drugs and alcohol, engaging in unsafe sex, and reckless driving (Adams \& Moore, 2007; Nelson, Lust, Story, \& Ehlinger, 2008). Roberts and Jones (2001) found high credit card debt correlations with compulsive buying. Grable and Joo (2006) found that heavy credit card debt among college students was also associated with financial stress.

The above findings are in direct opposition to those that show a positive relationship between responsible financial behaviors, including prudent borrowing practices, and increased wealth, not only in terms of retirement earnings but also in life satisfaction and physical and emotional
well-being (Xiao, Barber, \& Shim, 2008). In this regard, sound risk management methods have been deemed a high priority in managing family resources and in fostering stable family relationships (Garman \& Forgue 2012). Likewise keeping finances simple and avoiding excessive debt has been observed as a way to reduce financial stress (Hibbert, Beutler, \& Martin, 2004). Simplicity allows the family money manager to track more easily when the family has been living within its means, and how well an investment is really performing (Quinn, 2009).

Muskie and Winter's $(2004,1999)$ qualitative work among Midwestern families observed surprising reliance on consumer debt. Participants in the study viewed debt as an ongoing, normal, and acceptable way to control the family's financial situation; debt enabled continuity. To participants, even debt for nonessential "toys" seemed a perfectly logical thing. The feeling expressed was that "most people have a credit card that is never paid off." Family money managers wanted flexibility and spontaneity rather than the constraints they perceived in a formal budgeting process. Consumer debt enhanced life satisfaction and allowed stability, ease, and comfort. Even when they could pay for it, families continued to use creditjustifying it by the sense of freedom it gave them. They viewed the practice as harmless and inexpensive: Why not borrow some money and have a little extra to do the things I'd like to do now?

In today's complex financial arena, it is easy for families to feel that day-to-day decisions regarding consumer expenditures, savings, and debt have little influence on wealth growth because they are not professional money managers, but that is far from true. The purpose of this paper is to demonstrate a potential for increased wealth creation within a household through the use of a wealth sensitive integrated financial statement analysis that adopts the sound financial practices commonly espoused in family and personal finance literature. With the help of professionals, family money managers can be key players in the creation of wealth as they apply basic principles and practice them.

## Methodology

It is difficult to observe missed opportunities for wealth growth using traditional financial statements. To remedy these shortcomings, a wealth sensitive financial statement was created (Figure 1). The statement consists of two worksheets, a balance sheet, and an income and expense statement.

Figure 1. Wealth Sensitive Financial Statement—Illustrated


## Wealth Sensitive Balance Sheet

The wealth sensitive balance sheet contains the same information as the traditional balance sheet, but the information is presented in a different format. As illustrated in Figure 1, the information for each sub-category of cash and near cash is entered on a single line as the asset amount, the debt amount, and the equity dollar amount, respectively, from left to right. The same pattern is continued for each of the remaining five balance sheet categories.

From a wealth creation perspective, the role of each asset class was labeled as follows: cash and near cash for transaction purposes, investment assets as wealth producing, home residence as wealth preserving, business assets as income producing, use assets as wealth depreciating, and consumer debt as wealth depleting. Viewed in this way, some obvious implications for making wealth grow became more apparent. For example, the advantage of conserving on the purchase of certain use assets and investing that amount, instead, in wealth producing assets was recognized as an obvious wealth creation strategy.

## Wealth Sensitive Income and Expense Statement

The wealth sensitive income and expense statement was arranged in three columns, by type and amount: Income was in the first (or left) column, expenses in the second column, and saving/investing in the third (or right) column. A second formatting difference is that earned income (e.g., salary \& wages), the expenses paid out of earned income, and saving/ investing out of earned income are listed in the top section of the I \& E statement. Investment income (e.g., realized dividends, interest, or rental income), expenses paid out of investment income, and re-investment of realized investment income are listed in the second or bottom section.

With the I \& E statement arranged as described above, saving and investing out of earned income provided a direct observation of how much earned income had contributed to wealth growth-a direct link to the balance sheet. Likewise, the formatting provided a direct observation of how much investment income had contributed to wealth growth-a second direct link to the balance sheet.

## Worksheet 1 and 2

Worksheet 1 was developed to track adjustments changes made in the balance sheet. Worksheet 2 was developed to track how debt adjustments in the balance sheet affected changes in the I \& E statement, and to track annual appreciation or depreciation of listed assets on the balance sheet.

## Dover wealth review

A Dover wealth review was undertaken to identify actions that could be taken within the constraints of the Dover current financial situation, which would accelerate wealth growth toward financial preparation for retirement. Phase 1 of the review proceeded based on information in the Dover Case problem (Appendix A). The case problem consisted of a brief narrative describing the Dover family, some of their goals, and a summary table of relevant financial information. Much of that financial information was place in a traditional balance sheet and income-expense financial statement (Appendix B). Although the traditional financial statement was familiar, its format was not wealth sensitive and it did not provide the data needed for the wealth review. Therefore based on the Dover Case information, time value of money calculations were used to develop a Dover debt management and appreciation/ depreciation data table (i.e. Dover data table) in Phase 1 of the review.

In phase 2, the Dover data table was integrated into a wealth sensitive financial statement that consisted of a balance sheet, dated December 31, 2001, and an I \& E statement documenting cash flow during the previous 12 months (2001). This Dover wealth sensitive unadjusted financial statement was so labeled because it represented actual unadjusted financial data for the year 2001.

The unadjusted statement was then adjusted in phase 3 to become a Dover 2002 financial plan. This plan identified the way debts and assets would be managed to make wealth grow in the next 12 months, while maintaining living expenses at their 2001 level. Guidelines used in making these adjustments are contained in Appendix C, but noted here are two important guidelines that were used. First, during the adjustment process Dover resources were redistributed in ways that changed some balance sheet entries and increased others. These adjustments were always done in ways that kept Dover wealth constant. For example, one change was that investment assets were used to pay off rental home mortgage debt. Therefore, investment asset equity was reduced and rental home equity was increased keeping total equity or Dover net worth unchanged.

A second guideline involved the issue of timing. The previous 12 months of Dover finances were history, as documented in the Dover Case (dated December 31, 2001), and could not be changed. However, at the beginning of 2002 adjustments were made in the way assets were held; the effects of these changes were examined at the end of 2002. All adjustments kept Dover living expenses (food, clothing etc.) unchanged during the 12 months of 2002. This guideline was strictly adhered to throughout the analyses in this paper, ruling out the simplest example of potential wealth growth that might have otherwise been undertaken, increasing investment assets through a reduction in living expenses.

## Phase 1: The Dover data table. A Dover debt management

 and appreciation/depreciation data table was developed, as shown below in Table 1. Note that the first section contains all Dover asset values, the stated interest rates and the principle outstanding on each debt. The data was current as of the day the Dover review was conducted (December 31, 2001, the same date as listed on their balance sheet), and the 2001 rates were accepted as a reasonable estimate of rates during the next 12 months.The second section of the data table details information regarding Dover debt payments made over the course of the previous 12 months, broken out by principle and interest paid during 2001. Also shown is the rate and dollar amount of asset appreciation (positive numbers) or depreciation (negative numbers). This information for the year 2001 is repeated for the year 2002 based on the assumptions that the Dovers will continue debt payments on schedule "as agreed" and that 2001 appreciation/depreciation rates will continue in 2002.

## Phase 2: Dover unadjusted wealth sensitive financial

 statement. This phase consisted of combining data from the Dover traditional statements (Appendix A) with data from the Dover data table (Table 1) into an integrated wealth sensitive format. However, since the data had not been adjusted to affect the dual goals of the review, it was labeled the Dover Unadjusted Financial Statement. The analysis was completed in a side-by-side landscape format but is shown below in a portrait orientation (Figures 2a and 2b).A review of Figure 2 was conducted and the following observations were made: Checking $(\$ 2,000)$ and saving $(\$ 7,050)$ totaled $\$ 9,050$ available for transaction purchases. Investment asset equity included MMMF (\$30,124), a rental house $(\$ 63,606)$, and a 401 k tax deferred bond fund $(\$ 130,000$ equivalent to after-tax value of approximately $\$ 90,000$ ).

## Appendix A. The Dover Case : A High Income Example

Dan and Sue Dover are in their mid fifties. Sue works at Soft Skin International in management with income of $\$ 120,000$ in 2001. Sue's 401 k retirement account, current balance $\$ 130,000$, increased during 2001 from three sources: (1) Sue's 2001 employee contributions $\$ 7,200$, (2) her employer match (equal to $1 / 2 \%$ for each $1 \%$ she contributes up to a maximum match of $4 \%$ ), and (3) appreciation in the asset value of her diversified bond portfolio posting an increase of $\$ 6,894$ in 2001 for an investment return of $5.6 \%$, a little below the fund's ten year average. Dan works as a nurse practitioner at a care facility, $\$ 42,000$ salary in 2001 without benefits.

The Dovers also received income from additional sources in 2001. Interest income totaled $\$ 317$ from their savings account which pays $4.5 \%$ interest ( $\$ 7,050$ current balance). The Dovers also own a rental house (current market value $\$ 150,000$ ) which produced a cash flow of $\$ 5,400$ of net income ( $\$ 20,420$ income - 15,020 Expenses) in 2001, and it has appreciated at an annual rate of about $3 \%$ over the last several years. The mortgage balance against this property is $\$ 86,394$ with a stated rate of $8.5 \%$ and monthly payments of $\$ 765$. The Dover's current checking account balance is $\$ 2,000$. They also have a money market mutual fund with a balance of $\$ 30,124$, which increased by a rate of $4.8 \%$ on its previous year balance.

Two years ago the Dovers purchased a 4000 -square-foot home, which today has a market value of $\$ 449,440$ and appreciated in value during 2001 by about $5 \%$. They have a mortgage on this home (current balance $\$ 220,742$ ) with monthly payment of $\$ 1,828$ and a stated annual interest rate of 7.125 percent. Their nicely refurbished home contains personal belongings with replacement value of around $\$ 225,000$.

Use assets owned by the Dovers include Sue's late model Beamer (blue book value $\$ 48,000$ ). A year ago they traded in Dan's aged Toyota Tercel toward the purchase of a new SUV (current value $\$ 33,754$ ) that was financed with a $6.5 \%$ loan and $\$ 587$ monthly payments. They also own a new Winnebago RV motor home (blue book value $\$ 56,000$ ). To help finance travel expenses incurred lately $(\$ 10,000)$ and to refinance a loan they incurred a few years ago in the purchase of their motor home, which they use much less than they anticipated, the Dovers have accumulated a home equity loan, current balance $\$ 34,900,8 \%$ stated rate, and monthly payments of $\$ 361$.

Dover children living at home include twins, age 16, and an older daughter with her husband and two young children who live in the basement while they are finishing school and saving for a home down payment. Expenditures during the last year were $\$ 2,400$ charity, $\$ 45,384$ taxes, $\$ 79,982$ food and other living expenses, and debt payments (financial data historical context based on: Federal Reserve Bank of St. Louis, economic research, and Freddiemac mortgage rates since 1991).
Top 2002 financial goals for the Dovers are as follows (assuming employment earnings remain at 2001 levels):

1. Maintain their positive savings to keep their wealth growing and prepare financially for retirement
2. Maintain living expenses at their 2001level and double charitable contributions in 2002.
3. Payoff daughter's student loan (as detailed below) and gift $\$ 7,000$ toward her home down payment.

| Dover Case Details |  |  | December 31, 2001 |  |  |
| ---: | :--- | :---: | :---: | :---: | :---: |
| Asset Value | Description | Interest Rates $\%$ | Principle Outstanding | Monthly Payments | Appreciation Rate $\%^{2}$ |
| 449,440 | Home | 7.125 | 220,742 | 1,828 | 5 |
| 0 | H Equity Loan | 8 | 34,900 | 361 | -- |
| 150,000 | Rental House | 8.5 | 76,394 | 365 |  |
| 0 | Student Loan | 6 | 1,200 | 100 | -- |
| 33,000 | SUV | 32,754 | 587 | -0.2 |  |
| 48,000 | Beamer | -- | -- | -0.2 |  |
| 56,000 | Winnebago | -- | -- | -0.2 |  |
| 225,000 | P. Belonging | -- | -- | -- |  |
| 0 | Credit Card | 12.5 | 1,100 | 40 | -- |

Thus, investment assets combined were valued, after tax, at approximately $\$ 185,000$.

The home asset $(\$ 449,440)$ had two debts: a first mortgage $(\$ 220,742)$ and a second mortgage $(\$ 34,900)$ with equity of $\$ 193,798$ (\$228,698-34,900). The Dover's had taken over payments on their daughter's student loan $(\$ 1,200)$. For lack
of a more justifiable space on the balance sheet, and perhaps with hopeful aspirations, student loan debt was listed under business assets held for the purpose of creating income. The blue book market value of their vehicles (including Winnebago) totals $\$ 137,000$ with $\$ 32,754$ of debt against Dan's recently purchased SUV, and the use value of their personal belongings have been listed as $\$ 225,000$. Finally, the

## Appendix B. Dover Traditional Financial Statements

Dover Traditional Balance Sheet

| Assets |  | Liabilities | Dec 31,2001 |
| :---: | :---: | :---: | :---: |
| Monetary assets | Current liabilities |  |  |
| Cash | 2,000.00 | credit card | 1,100.00 |
| Checking | 7,050.00 | home equity loan | 34,900.00 |
| Investments |  |  |  |
| non tax deferred | Long-term Liabilities |  |  |
| money mkt mutual fund | 30,124.00 | home mortgage | 220,742.00 |
| rental house | 150,000.00 | rental mortgage | 86,394.00 |
| Tax deferred |  | SUV loan | 32,754.00 |
| 401 k bond fund | 130,000.00 | student loan | 1,200.00 |
| Housing |  | Total liabilities | 377,090.00 |
| home residence | 449,440.00 |  |  |
| Vehicles |  |  |  |
| Beamer--Sue | 48,000.00 |  |  |
| SUV--Dan | 33,000.00 |  |  |
| Winnebago | 56,000.00 |  |  |
| Personal property |  |  |  |
| personal belongings | 225,000.00 |  |  |
| Total assets | 1,130,614.00 | Net worth | 753,524.00 |

$\underline{\text { Dover Traditional Income and Expenditure Statement }}$

| Income | Expenditures Jan 1-Dec 31, 2001 |  |  |
| :--- | ---: | :--- | ---: |
| Salary--Sue | $120,000.00$ | Charity | $2,400.00$ |
| Salary--Dan | $42,000.00$ | Taxes-fed, state, loc | $45,889.00$ |
| Rental house net income | $5,400.00$ | Debt payments | $34,992.00$ |
| Interest income | 304.00 | Additional living expense |  |
| MMMF increase | $1,380.00$ | Food | $15,680.00$ |
| Employer match 401k | $3,600.00$ | Housing | $11,884.00$ |
|  |  | Transportation | $18,514.00$ |
|  |  | Health care | $8,720.00$ |
|  |  | $7,876.00$ |  |
|  |  | Clothing | $17,308.00$ |
| Total incomer | $\mathbf{N a t a l}$ | $\mathbf{1 6 3 , 2 6 3 . 0 0}$ |  |

Dover's wealth-depleting credit card debt has been posted at a modest $\$ 1,100$.

Strengths of the Dover end of year (December 31, 2001) balance sheet were observed as follows: Impressive total assets $(\$ 1,130,614)$, relatively modest total debt $(\$ 377,090)$, and considerable total equity $(\$ 753,524)$. In addition, based
on Dover income and expenses over the previous 12 months, strengths observed were: ample earned income $(\$ 160,000)$ and positive savings and investing $(\$ 9,317)$. These are, indeed, positive financial strengths to build on.

A critical review from a wealth growth point of view found the following: The Dovers are facing a financial disaster within

## Appendix C. Methodology Guidelines in a Wealth Growth Review

## General Recommendations

1. Give proper attention to education that leads to adequate income.
2. Be safety-minded, use appropriate risk management methods to forestall potential devastating losses.

## Specific Recommendations

1. Consider using excess cash/near cash, non-tax deferred assets, or low priority use assets to pay off debt and invest the resulting freedup perpetual cash flow toward wealth accumulating assets.
2. Conserve on wealth depreciating use assets; when timely, convert from wealth-depreciating to wealth-producing assets.
3. Consider refinancing a mortgage at more favorable terms.
4. Reinvest all net investment income.
5. Get a partial or full employer match (401k) when available.
6. Pay down debt on your home to less than $80 \%$ of its asset value to avoid mortgage insurance charges.
7. Save and invest $10 \%$ to $12 \%$ of earned income for the long haul.
8. Live within your means.

Two general and eight specific guidelines were considered in the wealth growth review reported in this study. These guidelines were selected from the literature review and from reasoned conclusions established in extant personal finance literature. Education and career development that leads to earned income is the underlying engine of wealth accumulation in the employee or wage earning family. Likewise, proper risk management methods are essential in safeguarding whatever wealth is accumulated.
When adequate income and proper risk management methods are in place, a particularly powerful move toward wealth accumulation is to identify a pool of mobile capital within the current balance sheet. This capital is typically obtained from excess cash/near cash, the timely sale of non-tax deferred investment assets, or the sale of use assets (those you no longer want to afford or have sufficient use for).

Once obtained, this pool of capital will typically be used to pay off expensive debts that can be paid in full. An exception would be the acceleration of mortgage payments to pay down the mortgage to $80 \%$ of the property value in order to eliminate mortgage insurance charges. When a debt is paid in full, the freed-up cash flow creates an income stream in the I \& E statement. Freed-up cash flow can be achieved in other ways as well (e.g., by refinancing a mortgage at more favorable terms or by reinvesting realized investment income). As will be illustrated below, these income streams can be sizable and fruitful avenues for wealth accumulation.

Freed-up cash flow can be directed toward a variety of wealth accumulating guidelines, such as items 7 through 9 in the table above, or used to meet other priority family financial goals. Not at any time in this analysis were resources taken from the Dover's living expenses or from their tax obligations to federal, state, or local governments to create a freed-up cash flow. However, if the Dovers were to reduce living expenses, that would also add to their wealth accumulation.

## Table 1. Dover Debt Management and Appreciation Data Table

|  |  |  |  | Previous 12 months-year 2001 |  |  |  |  |  | Next 12 months-year 2002 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Asset value | Asset/debt description | Interest rates | Principle balance | Pmt an monthly | mounts yearly | Principle paid | Interest paid | Appre rate | ciation amt | Principle paid (p) | Interest paid (i) | Appreciation amount |
| 449,440 | Home | 7.125 | 220,742 | 1,828 | 21,936 | 5,975 | 15,961 | 5\% | 21,402 | 6,415 | 15,521 | 22,472 |
| 0 | H equity loan | 8 | 34,900 | 361 | 4,332 | 1,475 | 2,857 | -- | -- | 1,598 | 2,734 | -- |
| 150,000 | Rental house | 8.5 | 86,394 | 765 | 9,180 | 1,755 | 7,425 | 3\% | 4,369 | 1,910 | 7,270 | 4,500 |
| 0 | Student loan | 6 | 1,200 | 100 | 1,200 | 1,092 | 108 | -- | -- | 1160 | 40 | -- |
| 33,000 | SUV | 6.5 | 32,754 | 587 | 7,044 | 4,746 | 2,298 | (0.2) | $(8,250)$ | 5,064 | 1,980 | $(6,600)$ |
| 48,000 | Beamer | -- | -- | -- |  | -- | -- | (0.2) | $(12,000)$ | -- | -- | $(9,600)$ |
| 56,000 | Winnebago | -- | -- | -- |  | -- | -- | (0.2) | $(14,000)$ |  |  | $(11,200)$ |
| 225,000 | P. belongings | -- | -- | -- |  | -- | -- | -- | -- | -- | -- | -- |
|  | Credit card | 12.5 | 1,100 | 40 | 480 | 320 | 160 | -- | -- | 363 | 117 | -- |
| 30,124 | MMMF | -- | -- | -- | -- | -- | -- | 4.80\% | 1380 | -- | -- | 6 |
| 130,000 | Bond fund 401k | -- | -- | -- | -- | -- | -- | 5.60\% | 6,894 | -- | -- | 7,280 |
| 1,121,564 | Totals | -- | 377,090 | 3,681 | 44,172 | 15,363 | 28,809 | -- | (205) | 16,510 | 27,662 | 6,858 |

Figure 2. Dover Wealth Sensitive Unadjusted Financial Statement (Beutler)

the next ten years, when they retire. Their investment assets ( $\$ 185,000$ after tax value) will be sufficient to provide them with no more than an annual $\$ 10,000$ of purchasing power for a period of 30 years from the point at which they retire, given $3 \%$ inflation per year (Israelsen, 2010). That $\$ 10,000$ per year, plus social security, will not measure up well when compared to the $\$ 170,000$ that their current lifestyle depends on, especially considering that without a change of course, they will continue to carry considerable outstanding debt.

From a wealth growth perspective, four course corrections would be enormously helpful to the Dovers. First, they should keep finances simple and live within their means. Progress toward simplification could be made by paying off their home equity loan, Dan's SUV auto loan, and credit card debt. This debt has allowed the Dovers to live beyond their means.

Second, the family should save and invest $10 \%$ of their earned income annually. This is a need shared by most-if not allemployee wage earning families. In recent years, the Dovers have persisted in living beyond their means by at least $\$ 10,000$
a year: last year with vacation travel and this year (2001) with a heavily financed SUV purchase. In order to make her 401 k contribution $(\$ 7,200)$ and qualify for a partial employer match, Sue borrowed $\$ 7200$ and an additional $\$ 758$ to cover other expenses. Consumer debt financing allowed the Dovers to, essentially, hide this form of overspending from themselves.

The third course correction would be to reinvest as much of their net investment income as they can, working toward the ideal to invest all of it. Fourth, the family should conserve on use asset holding and invest the freed up dollars in wealth-producing assets. In phase 3, the specific effect of these corrections on Dover (2002) wealth growth will be demonstrated.

## Phase 3: Dover adjusted financial statements-solution

A. The first task in phase 3 was to identify capital in cash/ near cash, non-tax-deferred investment assets, and use assets that could be accessed and used in more productive ways to simplify finances and accelerate Dover wealth growth. Tax-deferred investment assets were not considered for this purpose because they are taxed as current income upon withdrawal, plus an additional tax penalty would have been levied for early withdrawal. Choosing not to use a tax-deferred asset, it was demeaned appropriate to draw heavily on other forms of capital, as will be demonstrated next. But first a word to the wise: for a new comer to this exercise there is a tendency to reallocate less capital than is optimal. Through multiple renditions of this exercise, it became apparent that taking as much as was needed created the greatest wealth growth; the reach for capital in this section was deep. It would be important to help the Dovers recognize the dire nature of their situation.

Capital was taken from Dover near cash savings $(\$ 4,348)$ and from the non-tax-deferred MMMF $(\$ 30,000)$, as indicated in the left column of worksheet 1a, under the "cash available" heading (Figure 3a). Capital was also taken from the sale of Dover use assets: their Winnebago $(\$ 56,000)$, Sue's Beamer $(\$ 48,000)$, and Dan's SUV $(\$ 33,000)$.

Capital used was entered in the second column of worksheet 1 under the heading of "cash used." Note that the capital was used to pay off debts until there were insufficient funds to pay off more debts. The following debts were paid in full: the rental house $(\$ 86,394)$, the home equity loan $(\$ 34,900)$, their daughter's student loan $(\$ 1,200)$, Dan's SUV auto loan $(32,754)$, and the credit card $(\$ 1,100)$. More modest vehicles were also purchased for Dan (a \$6,000 Honda) and for Sue (a
$\$ 10,000$ Buick sedan)—exemplifying the great sacrifices that sometimes must be made in order to live within one's means. In worksheet 1, all capital was accounted for by checking to see that total cash available $(\$ 171,348)$ equaled total cash used ( $\$ 171,348$ ), as shown at the bottom of worksheet 1 (Figure 3a). All adjustments described in this exercise were assumed to incur zero transaction costs.

This completes the balance sheet portion of the review process. Note that the first portion consisted of selling assets to pay off debt, not just pay it down. The result was that Dover net worth did not change; the value of total assets was reduced, but the value of total debt was reduced by the same amount. This was a second checkpoint to assure that the accounting had been completed correctly-net worth remained unchanged.

Part two of the phase 3 review consisted in accounting for changes in the Dover income and expenditure statement (Figure 3 b statement, right side) that became necessary as a result of debts paid in full with balance sheet adjustments (Figure 3a. statement, left side). These "right side" changes were next entered on worksheet 2 (Figure 3b., bottom, right side) under the heading 'Debt Management Detailed Notes.' As indicated, the first mortgage payments on the Dover home for 2002 will total $\$ 21,936$ - $(\$ 6,415)$ principle paid and $(\$ 15,521)$ interest paid. Also, based on the assumption here that rates of change in asset values during 2001 would be acceptable estimates for what to expect in the next 12 months, home appreciation was anticipated to be \$22,472 in 2002.

The home equity loan was paid off on January 1, 2002 $(\$ 34,900)$ freeing up a perpetual cash flow equal to the eliminated debt payment (after tax $\$ 3,512=4,332-820$ ). Rental house entries included (1) appreciation (\$4,500), (2) debt paid-off (January 1, 2002, \$86,394), and (3) freed-up perpetual cash flow (after tax $\$ 6,999=9,180-2,181$ ). The student loan, SUV, and credit card debts were paid off, which resulted in additional freed-up cash flows totaling \$8,712 $[1,200+7,044+480-(12$ tax shelter loss $)]$. This freed-up cash flow was then entered into worksheet 1 b , adjacent to the 2002 Dover income and expenditure statement, and entered there as a decreased anticipated cash flow via less debt payments (i.e., compared to 2001, 2002 debt payments made out of earned income would be reduced by $\$ 13,056$ while taxes would increase by $\$ 832$ due to the corresponding lost tax shelter). Investment income would be increased through the reduction of $(\mathrm{p}+\mathrm{i})$ mortgage expenses on the rental house $(\$ 9,180)$. However, the freed-up cash from paying off this debt

Figure 3a. Dover Adjusted Financial Statement—Balance Sheet and Worksheet 1a

would be accompanied by a tax shelter loss of $\$ 2,181$ reducing the net freed amount to $\$ 6,999$.

With 2002 debt payments scheduled to decrease, it was necessary for accounting integrity to record how the resulting increased cash flow would be allocated. In accordance, these entries were entered as shown under the column heading "increase" in the column immediately to the right of the "decrease" column within worksheet 1 b : increased charity- $\$ 2,400$; daughter home down payment gift— $\$ 7,000$; discretionary saving-\$424; increased 401k employee contribution-\$2,400; and the two tax shelter losses described above ( $\$ 832$ and $\$ 2,181$ ). Note that the 2002 I \& E statement reflected these adjustments compared to the 2001 statement.

Phase 4: Dover wealth growth summaries: results. It is time to unveil the wealth growth summaries which indicate
the wealth growth achieved as a result of the Dover financial statement review. Shown in Table 2 are the wealth dimensions and the extent to which they contributed to the Dover's overall wealth growth in the preceding 12 months (2001) and in the next 12 months (2002). During 2001, the single greatest factor that contributed to Dover wealth growth was home and investment asset appreciation $(\$ 32,665)$. The greatest wealth growth detractor, use asset depreciation ( $\$ 34,250$ ), was large enough to completely cancel out their greatest contributing factor. With these two factors cancelling each other out, the next important contributor to wealth growth was principle paid to reduce debt $(\$ 15,363)$, followed by the reinvestment of investment income $(\$ 6,579)$. An additional detractor was saving out of earned income, which was negative (\$758). In 2001, Dover wealth grew by $\$ 23,199$. An interesting detail can be observed in column 2002 unadjusted. This column reveals what the anticipated wealth growth will be if the Dovers made

Figure 3b. Dover Adjusted Financial Statement—Income and Expenses, and Worksheets

no adjustments except to discontinue their pattern of taking on new consumer debt each year. Making this adjustment, their projected wealth growth for 2002 would be $\$ 32,834$, an increase of $\$ 9,635$ from this single positive financial practice.

The next column in Table 2 (2002 Adjusted Solution A) reveals the impressive results that accompany the adjustments
recommended in the wealth growth review presented here. The greatest detractor to Dover wealth growth in 2001 was overcome in 2002 by shifting use asset depreciation from a negative $\$ 34,250$ to a negative $\$ 3,000$. The next most important factor was to more than double, in 2002, the amount of reinvested investment income. It grew from $\$ 6,579$ in 2001 to $\$ 14,670$ in 2002. In addition, the Dovers were able to
meet all three of their new financial goals. They paid off the remaining balance on their daughter's student loan, doubled their charitable contribution, and contributed \$7,000 toward a home down payment for their daughter. The combined wealth review adjustments recommended for the Dover Case were estimated to increase Dover wealth creation by $\$ 25,795$ annually; truly a much needed financial boost in their late season preparation for retirement.

Solution B, in the last column, is a "what if" kind of solution. The Dovers did not have enough capital to pay off their home mortgage instead of the rental house mortgage as in Solution A. Had they been able to pursue that course of action, Solution B could have been operable, producing an additional $\$ 5,000-$ $\$ 6,000$ of wealth growth compared to Solution A.

## Implications and Discussion

This paper demonstrates the potential for the creation of wealth within a household through the use of a side-by-side review utilizing a wealth sensitive balance sheet and income and expenditure statement followed by adjustments that draw on financial variables and principles established in personal finance literature. In today's complex financial arena, it is easy for families to feel that the day-to-day decisions made regarding consumer expenditures, savings, and debt have very little influence on their wealth growth. Certainly some stockbrokers and mutual fund managers would like to think themselves as the total creator of wealth growth, but that is far from true. This paper illustrates how an individual or family money manager, possibly assisted by a financial educator or planner, can be key players in the creation of wealth growth.

Many families are too casual about decisions that dramatically influence wealth growth, valuing satisfaction and comfort over frugality (Muskie \& Winter, 1999). Financial decisions about saving and spending seem small while participation in consumer debt seems inexpensive. The only cost foreseen is the interest payment, and the delight of getting what one wants now far outweighs the price of credit, or so it seems. However, as demonstrated by the Dover case, decisions about incurring consumer debt, investment income spent and not reinvested, savings that never accrue, and not qualifying for an employer match on an IRA are decisions that do, in fact, have a great impact on wealth growth.

The Dover Case is an example of a high income family rather than an average American family. Appendix D presents the Jensen Case with median family income for a homeowner in 2001. As would be expected, their potential for accelerated wealth growth, as shown in the appendix, was a more modest \$14,026 (2001 unadjusted wealth growth \$10,769; 2002 adjustments and projected wealth growth equaled $\$ 24,795$ ). As this example suggests, wealth creation potential is likely to be lower for a more moderate income family in comparison to a higher one. Nevertheless, through the application of basic financial policies and principles the wealth creation can be quite impressive.

Following Muskie and Winter's $(1999,2004)$ in depth interviews with "average Americans families" (based on 1990 census: a family with one to three children, median income, and two adults, etc. living in the Great Plains region of the United States) who indicated that they liked the freedom of carrying an outstanding balance on their credit card because

Table 2. Alternative Dover Financial Adjustments that Accelerated Wealth Growth

| Year | 2001 | 2002 | 2002 | 2002 |
| :--- | :---: | :---: | :---: | :---: |
| Wealth Growth dimensions: | Unadjusted | Unadjusted | Adjusted solution A | Adjusted solution B |
| a) Financial goal met: increased charity | 0 | 0 | 2,400 | 2,400 |
| Home down payment gift--daughter | 0 | 0 | 7,000 | 7,000 |
| b) Saving/investing out of earned income | $(758)$ | $(758)$ | $(115)$ | 19,346 |
| c) Reinvested investment income | 6,579 | 6,630 | 14,670 | 5,526 |
| d) Employer match | 3,600 | 3,600 | 4,800 | 4,800 |
| e) Principle paid to reduce debt | 15,363 | 16,510 | 6,415 | 1,910 |
| f) Use asset depreciation | $(34,250)$ | $(27,400)$ | $(3,000)$ | $(3,000)$ |
| g) Home \& investment asset appreciation | 32,665 | 34,252 | 34,252 | 34,252 |
| Total | 23,199 | 32,834 | 66,422 | 72,234 |

of the freedom it afforded, the authors were compelled to raise the question, "Should financial professionals continue to recommend the long-standing conservative practices regarding the avoidance of debt and the frugal use of resources, given that many we seek to assist seem to care more about ease, and being able to pay their bills in the short term?"

Each person or family will have to answer that question for themselves. But when they come asking, wouldn't it be helpful if a financial professional ran their numbers to help them make an informed decision. What is the opportunity cost of carrying a persistent outstanding balance on a line of consumer credit? The analysis presented here indicates that in terms of lost wealth creation it is surely a lot more costly than a simple interest charge.

Individuals and families need help from educators and planners to implement financial policies and practices that result in adequate wealth growth toward a simple and sufficient financial future. Using the integrated financial statement analysis for recognizing what makes wealth grow is a technique recommended to professionals to illustrate and encourage families in their application of basic principles and practices that create wealth. It shouldn't be lost on the reader that the wealth growth review presented here asked the Dovers to give up their consumer lifestyle in exchange for what Stanley and Danko (1995) documented as the lifestyle of The Millionaire Next Door!

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