Setting Servicemembers Up for Success: Buying a Home, a Legal and Financial Analysis

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> *Owning a home is one of the most tried-and-true paths to wealth accumulation in our economy. . . . However, it takes more than a down payment to put people on the path that leads to ownership. Borrowers must be able to sustain their loans over the long term. Part of sustaining a loan is picking the right loan. Over the past several years, there has been an explosion of new and novel mortgage products . . . . But to the extent that these new mortgage products promote home buying decisions that are premised on unrealistic rates of home appreciation, they raise concerns. . . . Homeowners need to understand . . . [the] risks and thus financial evaluation, as well as a down payment, is a key ingredient for creating solid footing on the path of homeownership.*[1]

I. Introduction

Before purchasing a home, servicemembers need to do a thorough legal and financial analysis, considering their housing options, personal situations, and market conditions. To avoid future legal and financial problems, servicemembers should incorporate numerous legal and financial disciplines, including tax law, consumer law, landlord-tenant law, real estate finance law, bankruptcy law, family law, and military law, into this analysis. This article advocates a three-step approach for conducting an effective housing analysis and addresses significant issues servicemembers may encounter in the home buying process.

Part II of this article encourages servicemembers to identify and consider alternatives to buying a home—renting a residence, living in military housing, or residing in privatized military housing. Part II also addresses the advantages and disadvantages of buying a home and then draws a comparison to home-buying alternatives by discussing the advantages and disadvantages of renting a residence, living in military housing, and residing in privatized military housing.

Part III emphasizes the significance of evaluating a decision to purchase a home in light of an individual's personal situation, current market conditions, and the specific real estate property. This step highlights the importance of early financial planning and property selection. Part III not only addresses acquiring the right type of mortgage under the most advantageous terms but also addresses appraising the property in a manner that will maximize an individual's ability to later sell or lease the property. Finally, Part III goes further by discussing the importance of the source of funding for down payments and mortgage payments and the consequences of the property's location in light of family law considerations.

Part IV provides a quantitative starting point for analyzing whether it is more advantageous to purchase a home, rent a residence, or live in military or privatized military housing. As part of this analysis, Part IV stresses the importance of determining the potential income cash flow of a property. By conducting an income cash flow analysis based on renting the property to tenants, servicemembers can identify in advance of buying a property whether they will be able to keep the property after relocating to a new duty assignment. Part IV also recognizes that many factors cannot be easily quantified and will need to be prioritized differently depending on a servicemember's situation. To this end, Part IV suggests using mechanisms such as a decision matrix[2] to address these significant concerns.

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[1] Mark W. Olson, Governor, Fed. Reserve Bd., Speech at the Community Development Policy Summit, Cleveland, Ohio: Exploring the Benefits and Challenges of an Ownership Society (June 23, 2005) (transcript available at http://www.federalreserve.gov/boarddocs/speeches/2005/20050623/default.htm) [Olson Speech].

[2] CAPTAIN RICHARD B. STIKKERS, DECMAT PROGRAM FOR WINDOWS VERSION 2.2 (1998), *available at* http://www.dcswift.com/military/software.html (allowing consumers to download the DECMAT software directly from the internet for free). *See infra* Appendix D (allowing decision makers to use a decision matrix to compare different courses of action by prioritizing and evaluating different factors).

II. Step One: Understanding Available Options

Servicemembers should consider all of their housing options before purchasing a home. The full range of housing options typically includes buying, renting, living in military housing, or residing in privatized military housing. At some duty locations, servicemembers may be required to live in military housing, foreclosing the need to consider other housing options. At other locations, military and privatized military housing may not be available, forcing servicemembers to rent or buy. Still, at other locations, servicemembers may have all of these housing options readily available and may need to weigh their options according to their personal financial situation and market conditions. Regardless, servicemembers need to conduct a housing analysis in a manner that maximizes the advantages and minimizes the disadvantages of their choice, thereby reducing unnecessary exposure to legal and financial risk.

A. Buying Property

1. Advantages

As previously stated, owning a home is "one of the most tried-and-true paths to wealth accumulation in our economy."[3] It is not surprising, therefore, that buying a home has numerous financial advantages.[4] First and foremost, buying a home "builds wealth in two ways: through the 'forced savings' of paying down a mortgage, and through appreciation -- the rise in the home's value over time."[5] Simultaneously, buying a home allows servicemembers to diversify their financial portfolios through real estate equity[6] while taking advantage of the principle of leverage.[7] Specifically, because real estate investments allow for a higher percentage of debt to fair market value compared to other types of investment, servicemembers might experience a significant rate of return on a small cash investment.[8]

In addition to building wealth, owning a home allows servicemembers to reduce certain expenses by deducting mortgage interest and mortgage interest points,[9] mortgage prepayment penalties,[10] property taxes,[11] and casualty losses.[12] These deductions are especially valuable to servicemembers because they "receive tax-free quarters allowances to pay interest expenses, which are themselves tax deductible."[13] Additionally, upon the sale of their principal residence, homeowners can

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3 Olson Speech, *supra* note 1.

4 The following analysis will vary considerably based on the type of property purchased and the use of the property. Specifically, the analysis of purchasing a single family residence differs from that of a condominium, shares in a cooperative, a mobile home, or a multi-family property partially used as a rental unit. For example, "Cooperatives (coops) are an arrangement in which you don't hold title to your individual unit; instead, you own stock in a corporation that owns the development." MARTIN NISSENBAUM ET AL., ERNST & YOUNG'S PERSONAL FINANCIAL PLANNING GUIDE 339 (5th ed. 2004). Although coops are normally less expensive than single family residences and provide amenities similar to apartment complexes, they involve unpredictable maintenance fees and potential mismanagement by the corporation board. *Id.* Condominiums (condos) are "an arrangement in which you actually hold title to the unit you live in; you also own an interest in the development's land and common areas." *Id.* at 340.

5 Liz Pulliam Weston, *Why It's Smarter to Buy than Rent*, MSN MONEY, Jan. 15, 2006, http://moneycentral.msn.com/content/Banking/Homebuyingguide/P72655.asp.

6 *See* NISSENBAUM, *supra* note 4, at 329.

7 *See* CARLTON H. SHEETS, HOW TO BUY YOUR FIRST HOME OR INVESTMENT PROPERTY WITH NO DOWN PAYMENT STEP BY STEP MANUAL 2-4 to -6 (3d ed. 1997).

8 *See* D. BARLOW BURKE, JR., REAL ESTATE TRANSACTIONS, EXAMPLES AND EXPLANATIONS 363 (1993). For example, transaction costs aside, if a servicemember pays $100,000 for a home and the home increases in value by $10,000, the servicemember receives a ten percent return on his investment SHEETS, *supra* note 7, at 2-5. If the servicemember makes a $10,000 down payment on a mortgage, and the home goes up in value $10,000, the servicemember makes a 100% return on his investment by using other people's money. *See id.* This is a simple example of the benefits of leveraged investment. The effects of transaction costs will be considered later in the article. *See infra* pp. 4-6, apps. A and B.

9 *See* INTERNAL REVENUE SERV., DEP'T OF TREASURY, PUB. 17 YOUR FEDERAL INCOME TAX 144-47 (2005) [hereinafter PUB. 17] (discussing the deductibility of mortgage interest points) [hereinafter PUB. 17]; I.R.C. § 163(h) (LEXIS 2006) (discussing the deductibility of mortgage interest). *See generally* ADMINISTRATIVE AND CIVIL LAW DEP'T, THE JUDGE ADVOCATE GENERAL'S SCHOOL, U.S. ARMY, JA 261, REAL PROPERTY GUIDE 1-63 (Dec. 1997) [hereinafter JA 261] (discussing that points are considered tax deductible interest only if they are solely for the use of money and not for lender services). *See infra* pp. 4, 24, apps. A and B.

10 MAJOR DAVID TRYBULA & LIEUTENANT COLONEL RICHARD HEWITT, ARMED FORCES GUIDE TO PERSONAL FINANCIAL PLANNING 182 (5th ed. 2002).

11 *See* I.R.C. § 164(a); PUB. 17, *supra* note 9, at 142. *See infra* p. 4.

12 I.R.C. § 165c(3). *See generally* JA 261, *supra* note 9, at 1-63 (distinguishing casualty losses that are sudden and unexpected such as damage to a home due to a fire, storm, flood, hurricane, vandalism, or other similar event, from non-casualty losses such as termite damage or progressive deterioration).

13 TRYBULA & HEWITT, *supra* note 10, at 182. "If you are . . . a member of the uniformed services and receive a housing allowance that is not taxable, you still can deduct your real estate taxes and your home mortgage interest. You do not have to reduce your deductions by your nontaxable allowance."

exclude up to $250,000 ($500,000 for joint tax returns) of capital gain.[14] Finally, unlike renters, homeowners avoid periodic rent increases.[15]

Besides reducing certain expenses, owning a home allows homeowners to protect their financial assets. First, owning a home is a hedge against inflation since homes have "historically appreciated faster than the cost of living."[16] Second, by buying a home, servicemembers can protect equity invested in their home in the event of bankruptcy.[17] Third, homeowners experience protections from foreclosure. For example, homeowners may exercise redemption rights.[18] Furthermore, servicemembers and their spouses[19] that own homes are protected by the Servicemembers Civil Relief Act (SCRA).[20] For example, if a servicemember acquires a home with a mortgage, enters the military, and subsequently breaches the mortgage obligation, the mortgage lender may not sell, foreclose, or seize the property during, or within ninety days after, the period of the servicemember's military service unless there is a court order granting such action or an applicable agreement.[21]

In addition to protecting assets, homeowners benefit from many intangible advantages such as enjoying the feeling of autonomy that comes from owning a home and the feeling of ease that comes from being able to borrow against home equity if the need arises. Moreover, homeowners do not have to worry about lease renewals, owners objecting to pets residing in the property, property managers preventing property improvements, or landlords exercising their right of entry.[22] Furthermore,

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INTERNAL REVENUE SERV., DEP'T OF TREASURY, PUB. 530 TAX INFORMATION FOR FIRST-TIME HOMEOWNERS 2 (2005) [hereinafter PUB. 530]. Receiving a housing allowance, however, also has some potential negative implications. *See infra* note 81 and accompanying text.

[14] I.R.C. § 121(a). "Gross income shall not include gain from the sale or exchange of property, if during the 5-year period ending on the date of the sale or exchange, such property has been owned and used by the taxpayer as the taxpayer's principal residence for period aggregating 2 years or more." *Id. See infra* pp. 5, 22-25. This exclusion may be even greater if the homeowner dies after experiencing significant appreciation in his property because the decedent's beneficiaries may receive a "stepped up" basis equal to "the fair market value of the property at the date of the decedent's death." I.R.C. § 1014(a)(1). Decedent is defined as: "A dead person, esp. one who has died recently." BLACK'S LAW DICTIONARY 412 (7th ed. 1999). Basis is defined as the following: "The value assigned to a tax-payer's investment in property and used primarily for computing gain or loss from a transfer of the property." *Id.* at 145. Stepped-up basis is defined as the following: "The basis of property transferred by inheritance. Stepped-up basis equals the fair market value of property on the date of the decedent's death (or on the alternate valuation date." *Id.* at 145. The stepped-up basis advantage, however, will be eliminated to a great degree for property acquired from a decedent dying after December 31, 2009. *See* I.R.C. § 1014(f) (terminating the application of I.R.C. § 1014 to decedents dying after 31 December 2009); I.R.C. § 1022(a) (treating property transferred by a decedent dying after 31 December 2009 as a gift with a basis equal to the lesser of the fair market value or the decedent's adjusted basis). Adjusted basis is defined as the following: "Basis increased by capital improvements and decreased by depreciation deductions." BLACK'S LAW DICTIONARY, *supra* at 145. Depreciation is defined as the following: "A decline in an asset's value because of use, wear, or obsolescence." BLACK'S LAW DICTIONARY, *supra* at 452.

[15] *See* KENNETH M. MORRIS & VIRGINIA B. MORRIS, GUIDE TO UNDERSTANDING PERSONAL FINANCE 56 (3d ed. 2000). Homeowners, however, may experience mortgage payment increases if they acquire an adjustable rate mortgage. *See infra* pp. 16-17. In addition, homeowners may experience increases in property tax, homeowner's fees, and insurance premiums.

[16] NISSENBAUM, *supra* note 4, at 329. This proposition has been demonstrated time after time by numerous studies such as the study conducted by Ali Anari and James Kolari, evaluating applicable data from 1968 to 2000. Ali Anari & James Kolari, *House Prices and Inflation*, *in* 30 REAL ESTATE ECONOMICS (Mar. 22, 2002) (comparing the relationship between the prices of houses and the prices of nonhousing goods and services; discussing numerous different studies reinforcing the proposition that real estate is the only "complete hedge" against inflation; and showing that real estate has a positive relationship to inflation while common stocks have a negative relationship to inflation).

[17] For example, in the event of bankruptcy it is possible for a debtor to claim a homestead exemption even if the debtor resides elsewhere for a period of time, rents the home to others, or unsuccessfully lists the property for sale as long as the debtor intends to return to the home. *See, e.g.*, *In re* Inmon, 137 B.R. 757 (Bankr. E.D. Ark. 1992); *see also* 11 U.S.C.S. § 522 (LEXIS 2006). *See infra* p. 6 (discussing federal and state homestead exemptions). Homestead is defined as the following: "The house, outbuildings, and adjoining land owned and occupied by a person or family as a residence. As long as the homestead does not exceed in area or value the limits fixed by law, in most states it is exempt from forced sale for collection of a debt." BLACK'S LAW DICTIONARY, *supra* note 14, at 738.

[18] *See* GRANT S. NELSON & DALE A. WHITMAN, REAL ESTATE FINANCE LAW 467 (3d ed. 1994). Redemption is defined as the following:

> 1. The act or an instance of reclaiming or regaining possession by paying a specific price. 2. Bankruptcy. A debtor's right to repurchase property from a buyer who obtained the property at a forced sale initiated by a creditor. . . . 4. Property. The payment of a defaulted mortgage debt by a borrower who does not want to lose the property.

BLACK'S LAW DICTIONARY, *supra* note 14, at 1282. After defaulting on a mortgage, under certain conditions, "a mortgagor may perform his obligation under the mortgage and have the title to his property restored free and clear of the mortgage." NELSON & WHITMAN, *supra* note 18, at 467. In addition, in "about half the states, the mortgagor . . . [is] permitted for a specific period after a valid foreclosure sale to redeem 'from the sale' by paying to the foreclosure sale purchaser the foreclosure sale price plus, in some instances, certain additional amounts." NELSON & WHITMAN, *supra* note 18, at 468.

[19] 50 U.S.C.S. app. § 538 (LEXIS 2006).

[20] *Id.* app. §§ 533, 501-96. "This Act may be cited as the Servicemembers Civil Relief Act." *Id.* app. § 501.

[21] *Id.* app. § 533.

[22] *See* ROGER A. CUNNINGHAM ET AL., THE LAW OF PROPERTY 274 (2d ed. 1993). In general, leases:

> frequently give landlords a privilege to enter for stated purposes, such as to inspect or to show the premises to prospective new tenants. If the landlord has a duty to make certain repairs, he generally is privileged to enter for that purpose. In the absence of some

those purchasing a home can take advantage of numerous government incentives ranging from grants that encourage first time homeownership[23] to subsidies for those making homes more energy[24] or water efficient.[25]

2. Disadvantages

Unfortunately, numerous disadvantages are also associated with owning a home. Homeowners must pay purchasing costs, such as down payments and closing costs; continuing maintenance expenses, including plumbing and roof repairs;[26] escalating taxes, such as property and school taxes; and ongoing insurance premiums, including homeowners insurance and, possibly, private mortgage insurance (PMI).[27] Just to cover maintenance and repair costs, homeowners should budget at least one percent of the home's purchase price each year.[28] This amount can be considerably greater depending on the home's age, how well the home was maintained previously and the harshness of the climate.[29] Additional funds may be necessary to pay for supplemental insurance to cover floods, tornados, hurricanes, earthquakes, and other events not typically covered by homeowners insurance.[30] All of these expenses are in addition to a homeowner's monthly mortgage payment. By not planning for these expenses or other unforeseen circumstance, a homeowner may run out of money, default on his loan, and even experience foreclosure.

Although homeowners pay these numerous expenses associated with owning a home, they still may not experience significant tax savings. First, to take advantage of the tax benefits, homeowners must itemize their tax deductions, rather than taking the standard deduction, and determine what taxes and expenses are deductible.[31] Second, unless homeowners are paying significant mortgage interest and property taxes, they may experience little benefit from itemizing their taxes as compared to taking the standard deduction.[32]

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specific privilege to enter, it has been held that the landlord may enter to collect rent and to distrain where that is permitted.

Id. Distrain is defined as the following: "To force (a person, usu. a tenant), by the seizure and detention of personal property, to perform an obligation (such as paying overdue rent)." BLACK'S LAW DICTIONARY, *supra* note 14, at 487.

[23] *See, e.g.*, Texas Department of Housing and Community Affairs, *The Texas First Time Homebuyer Program*, http://www.tdhca.state.tx.us/homeowner ship/fthb/index.htm (last visited Feb. 16, 2007) (providing grant funds up to five percent of the mortgage amount); Georgia Department of Community Affairs, Georgia Dream Homeownership Program, http://www.dca.state.ga.us/housing/Homeownership/programs/downloads/GADreamBrochure.pdf (last visited Aug. 15, 2006).

[24] *See, e.g.*, Virginia Department of Housing and Community Development, Weatherization Assistance Program, http:/www.dhcd.virginia.gov/HOUSING/ HEE/Weatherization.htm (last visited Aug. 15, 2006) (providing financial incentives for weatherizing homes); Database of State Incentives for Renewables & Efficiency, http://www.dsireusa.org (last visited Feb. 16, 2007) (providing links by state to federal and state incentives for renewable energy); Database of State Incentives for Renewables & Efficiency, *Residential Solar and Fuel Cell Tax Credit*, http://www.dsireusa.org/library/includes/incentive2.cfm?Incen tive_Code=US37F&State=federal&currentpageid=1&ee=1&re=1 (last visited Feb. 16, 2007) (providing up to a $2,000 tax credit for the purchase and installation of residential solar electric and solar water heating).

[25] *See, e.g.*, Austin City Connection, Toilet Replacement Program, http://www.ci.austin.tx.us/watercon/sftoilet.htm (last visited Aug. 15, 2006) (offering free replacement water efficient toilets).

[26] *See* Liz Pulliam Weston, *The Hidden Costs of Homeownership*, MSN MONEY, http://moneycentral.msn.com/ content/Banking/Homebuyingguide /P37628.asp?Printer (last visited Jan. 26, 2006) [hereinafter *Hidden Costs*].

[27] *See* MORRIS & MORRIS, *supra* note 15, at 57, 64. "To guarantee payment" if a buyer defaults, lenders often require buyers to pay for PMI if they make a down payment of less than twenty percent. *Id.* at 64.

[28] *Hidden Costs*, *supra* note 26.

[29] *Id.*

[30] *See id.*; *see also* Sarah Max, *Should I Buy a House?*, CNNMONEY.COM (Apr. 4, 2005), http://money.cnn.com/2005/03/31/real_estate/homeguide_should ibuy (addressing the need to keep a large cash reserve greater than four to six months of typical expenses to cover unanticipated expenses).

[31] *See* PUB. 17, *supra* note 9, at 131. (For example, while state, local, and foreign real estate taxes can be deducted, taxes for local benefits, trash and garbage pickup fees, and homeowner association charges cannot be deducted. Similarly, homeowners cannot deduct fire or homeowner's insurance premiums, Federal Housing Administration (FHA) or other mortgage insurance premiums, depreciation, or the cost of utilities.).

[32] For example, if a joint tax filing homeowner in the twenty-five percent tax bracket pays $11,000 in mortgage interest and other deductions in 2005, he only receives a $250 additional tax benefit if he itemizes his deductions instead of taking the $10,000 standard deduction. Weston, *supra* note 5. Furthermore, the tax benefit will "shrink over time" since the amount of interest paid on a mortgage generally decreases each year while the standard deduction keeps "getting adjusted upward, squeezing your tax break from both directions." *Id.*

To make matters worse, a bipartisan Advisory Panel on Federal Tax Reform established by U.S. President George W. Bush on January 7, 2005,[33] recommended[34] "lowering the mortgage interest cap,"[35] "converting the mortgage interest deduction to a [fifteen percent] tax credit,"[36] and increasing the length of ownership requirement.[37] If this proposal becomes law, persons in a higher tax bracket with a higher mortgage will likely see less of a tax benefit than under the current system.[38] For example, under current law a homeowner in the twenty-five percent tax bracket paying $18,000 a year in interest on a $300,000 loan would reduce his taxable income by $18,000 and save $4500 (i.e., $18,000 x .25) in taxes.[39] The same homeowner under the Advisory Panel proposal would only save $2700 (i.e., $18,000 x .15).[40]

In addition to experiencing potentially fewer actual tax savings, homeowners may also build less wealth than they anticipate. Specifically, homeowners risk a decrease in their home's value if the real estate market declines.[41] This is important because a downturn in the market could cause a property's value to fall below the principal owed on a mortgage, leaving homeowners unable to sell their properties and pay typical costs of sale without being financially liable for significant deficiencies.[42] For example, if a seller of a home experienced a 5% decline from his home's purchased price of $300,000 and

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[33] The President's Advisory Panel on Federal Tax Reform, *America Needs a Better Tax System: Statement by the Members of the President's Advisory Panel on Federal Tax Reform* (Apr. 13, 2005), http://www.taxreformpanel.gov/04132005.pdf.

[34] *See* THE PRESIDENT'S ADVISORY PANEL ON FEDERAL TAX REFORM, REPORT OF THE PRESIDENT'S ADVISORY PANEL ON FEDERAL TAX REFORM, SIMPLE, FAIR, AND PRO-GROWTH: PROPOSALS TO FIX AMERICA'S TAX SYSTEM (2005), *available at* http://www.taxreformpanel.gov/final-report/TaxReform_Intro.pdf [hereinafter FEDERAL TAX REFORM]. Current law allows an interest deduction of up to $1.1 million of mortgage debt. *Id.* at xvi. The proposal provides for a home credit equal to fifteen percent of paid mortgage interest and limits mortgages to an average regional price of housing ranging from about $227,000 to $412,000. *Id.* at xvii.

[35] Jeanne Sahadi, *Mortgage Tax Changes: Winners & Losers: Here's a Look at Some Issues Concerning the Tax Reform Panel's Proposal to Trim Mortgage Breaks*, CNNMONEY.COM (Oct. 25, 2005), http://money.cnn.com/2005/10/25/pf/ taxes/homededuction_proposal/index.htm [hereinafter *Mortgage Tax Changes*]. The mortgage interest cap is "the amount of a loan on which homeowners would receive a tax break for interest paid." *Id.*

[36] *Id.* "Deductions reduce your taxable income but favor those who itemize and those in higher tax brackets. Credits, which are dollar-for-dollar reductions of the taxes you owe, benefit all taxpayers equally." *Id.*

[37] FEDERAL TAX REFORM, *supra* note 34, at 75. Comparing the current and proposed laws:

> Under current law, up to $500,000 of capital gains on a home that a taxpayer has owned and used as his principal residence for two out of the last five years may be excluded . . . . The Panel recommends that the length of time an individual must own and use a home as a principal residence to qualify for the tax exemption be increased from two out of five years to three out of five years.

Id. at 74-75.

[38] *Mortgage Tax Changes*, *supra* note 35.

[39] *Id.*

[40] *Id.* Theoretically, homeowners may be able to use the new law to their advantage as follows:

> It also may be the case for some homeowners that if they no longer can deduct their mortgage they may opt to stop itemizing altogether, instead taking the standard deduction plus the mortgage credit, if that would be allowed. In that case, conceivably they might enjoy tax savings equal to or greater than they would see under the current system.

Id.

[41] *See* NISSENBAUM, *supra* note 4, at 329.

[42] *See* TRYBULA & HEWITT, *supra* note 10, at 157. Typical costs of sale include realtor costs, conveyance taxes, title costs, attorney fees, and inspections. *See id.* at 165-70. There are many indicators that 2006 and 2007 will mark a significant downturn in the real estate market. For example, a report released by the U.S. Department of Housing and Urban Development showed a 17.3% decrease in the sales of new single-family homes compared to 2005. U.S. Department of Commerce, New Residential Sales in December 2006, www.census.gov/const/newressales.pdf. Similarly, the National Association of Realtors reports that sales of existing single-family homes fell 8.4%, which marked the largest annual decline in nearly 20 years. John W. Schoen, *Has Housing Market Bottomed Out?*, MSNBC, Jan. 25, 2007, http://www.msnbc.msn.com/id/16812267. These declines in sales have accompanied a decrease in the median prices of homes in some areas. For example, the median price of homes in the Northeast of the United States "plunged" 4.8% in 2006. Matt Woolsey, *America's Best and Worst Housing Markets*, MSNBC, Feb. 1, 2007, http://www.msnbc.msn.com/id/16929669/. *See generally* National Association of Realtors, *Median Sales Prices of Existing Single-Family Homes for Metropolitan Areas*, http://www.realtor.org/Research.nsg/files/MSA PRICESF.pdf/$FILE/MSAPRICESF.pdf (last visited Feb. 17, 2007) (showing the median prices of homes by year and by quarter). *See infra* notes 206-208 and accompanying text (showing historic examples of market downturns). Making matters even more, some experts such as Federal Reserve Vice Chairman Donald L. Kohn believe that:

> [H]ousing starts may be not very far from their trough, but the risks around this outlook still are largely to the downside. Although house prices nationally have decelerated noticeably and appear to have fallen in some markets, they are still high relative to rents and interest rates. Building permits decreased substantially again in November [2006], and inventories of unsold homes have only started to edge lower. We also do not know whether the possible stabilization that seems to be taking hold would be immune to a rise in longer-term interest rates should term premiums increase or the federal funds rate fail to follow the downward path currently built into market expectations.

had to pay 7% of the home's $285,000 sale's price to cover realtor and other costs of sale, he would have to have $34,950 (i.e. $15,000 + $19,950) in equity just to cover the costs of selling his home without having to bring additional funds to the closing. Furthermore, due to frequent moves and associated transaction costs, military buyers may not experience significant equity growth since they often own their properties for short periods of time.[43]

Another disadvantage homeowners may experience is fewer bankruptcy protections. Historically, debtors filing for bankruptcy protection could choose between the possible unlimited state homestead exemption[44] and the limited federal bankruptcy homestead exemption.[45] These protections have been extremely valuable in the event homeowners become defendants in civil lawsuits.[46] Due to significant recent changes in the federal bankruptcy code, however, there are numerous limitations to the state homestead exemption.[47] For example, if a debtor acquires a homestead within 1215 days preceding filing bankruptcy, the debtor can only exempt $125,000 of his homestead.[48] Fortunately, this limitation "does not include any interest transferred from a debtor's previous principal residence (which was acquired prior to the beginning of such 1215-day period) into the debtor's current principal residence"[49] if both residences are located in the same state. Furthermore, a homestead exemption above the $125,000 is possible if "it is reasonably necessary for the support of the debtor and any dependent of the debtor."[50]

Additional disadvantages may also accompany owning a home. First, military buyers must often engage in a long distance, timely, and costly process of locating a suitable property, acquiring necessary financing, and closing the transaction in time for a permanent change of station (PCS) or deployment. Second, homeowners must often comply with restrictive covenants and city and county codes and pay fees related to homeowner associations.[51] Third, homeowners are less mobile compared to renters because they must sell, rent, or allow their property to remain vacant upon their PCS or deployment.[52] For servicemembers who do not like these constraints, renting a home may be preferable because renting ensures maximum flexibility and mobility.

Donald L. Kohn, Vice Chairman, Fed. Reserve Bd., Speech at the Atlanta Rotary Club, Atlanta Ga: The Economic Outlook (Jan. 8, 2007) (transcript available at http://www.federalreserve.gov/boarddocs/speeches/2007/20070108/default.htm).

[43] *See* RICHARD J. BUDDIN ET AL., AN EVALUATION OF HOUSING OPTIONS FOR MILITARY FAMILIES 44 (1999), *available at* http://www.rand.org/pubs/monograph_reports/MR1020/index.html. Servicemembers, however, may be able to keep their homes longer by leasing the property to tenants. *See infra* pp. 23-24.

[44] *See, e.g.*, TEX. PROP. CODE § 41.002 (LEXIS 2005). Texas has the following unlimited in value homestead exemption:

> If used for the purposes of an urban home or as both an urban home and a place to exercise a calling or business, the homestead of a family or a single, adult person, not otherwise entitled to a homestead, shall consist of not more than 10 acres of land which may be in one or more contiguous lots, together with any improvements thereon.

Id.

[45] 11 U.S.C.S. app. § 522(b) (LEXIS 2006).

[46] *See generally* Buying a Home via the Internet; Homestead Exemption, http://iml.jou.ufl.edu/projects/Spring02/samsing/Assets/Assets%20Right%Side//homestead.htm (last visited 25 Feb. 2006) (drawing attention to the difference between California and Florida law regarding O.J. Simpson's sale of his homestead) (on file with author). Had O.J. Simpson owned a homestead in Florida or Texas, he would have been able to keep his home rather than selling it due to California's small homestead allowance. *Id.* *See generally* Jack Novak, *Protection Time, the New Bankruptcy Law is Tough on Debtors* (6 June 2005) http://www.forbes.com/free_forbes/2005/ 0606/146.html (discussing the extremely rewarding practice of individuals such as former Conseco executive Ngaire Cuneo to invest their assets in a home in one of the eight states with historic unlimited homestead exemptions) (on file with author). In addition, servicemembers may want to consider acquiring an umbrella policy or increasing their homeowners and automobile policy coverage to provide appropriate protection from such civil lawsuits.

[47] *See* The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 § 1501(a), Pub. L. No. 108-9 (2005). "Except as otherwise provided in this Act, this Act and the amendments made by this Act shall take effect 180 days after the date of enactment of this Act." *Id.*; *see also* 11 U.S.C.S. § 101.

[48] 11 U.S.C.S. app. § 522(p)(1).

[49] *Id.* app. § 522(p)(2)(B). In other words, as long as a servicemember moves from a previous residence into a current residence within the same state, the servicemember's entire transferred equity can be protected. *See id.*

[50] 11 U.S.C.S. app. § 522(q)(2).

[51] *See* NATIONAL MILITARY FAMILY ASSOCIATION & NATIONAL ENDOWMENT FOR FINANCIAL EDUCATION, MILITARY FAMILIES, MONEY & MOBILITY 11 (2002) [hereinafter MONEY & MOBILITY]. Comparing homeowners and renters, renters would have to comply with terms in their leases. Homeowner landlords may want to ensure that leases include terms to ensure that tenants comply with restrictive covenants and city and county codes. For example, if boats are prohibited from being parked in driveways, landlords may want to include such terms in their leases. In short, homeowner landlords can ensure tenants comply with covenants and codes by drafting tight leases, giving tenants little power to modify the property. For example, landlords could prohibit tenants from painting the exterior of the property without first getting permission. In certain areas, painting the exterior of the property may be regulated to allow only certain color schemes. Painting a property with the incorrect color scheme may result in a violation and subsequent violation costs.

[52] *See* MORRIS & MORRIS, *supra* note 15, at 57.

B. Renting Property

1. Advantages

Renting maximizes flexibility and mobility. Renters can move into a property by signing a lease[53] and can move out after terminating the lease.[54] Renters have the luxury of being able to ignore the hassles of monitoring the strength of the real estate market and locating a buyer for their property upon their relocation.[55] Servicemembers can take advantage of this flexibility as their need for space grows due to marriage or birth of a child or shrinks due to divorce or a child's departure from the home.[56] In addition, the SCRA increases this flexibility by giving military renters and their spouses the ability to terminate their leases early in the event of a PCS or a deployment of ninety days or longer.[57] Military members may enjoy even more flexibility in their ability to terminate their leases under unforeseen circumstances if their landlords allow them to include military clauses in their leases.[58]

In addition to the principal advantage of flexibility and mobility, renters enjoy the advantages of being able to pursue other financial opportunities while simplifying their lives. First, rather than worrying about steep entrance costs, renters often need little more than a security deposit and a month's rent to move into a property.[59] Furthermore, depending upon the terms of the lease,[60] landlords usually are obligated to pay for most repairs and maintenance, property taxes and fees, and even some utilities.[61] A landlord's failure to make necessary repairs may allow the tenant to vacate the property under the theory of constructive eviction.[62] The overall lower costs of renting give renters the opportunity to invest their money elsewhere rather than having their funds committed in the home purchase and maintenance process.[63] Second, renters can quickly and

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[53] CUNNINGHAM, *supra* note 22, at 273. The majority of states follow the "English rule," that the landlord "impliedly warrants, and has a duty to see to it, that the premises will be free from the presence of a former tenant holding over or from some other person wrongfully in possession." *Id.* In contrast, a minority of states follow the "American rule," that landlords do not impliedly warrant that tenants shall have actual possession under the rationale that the landlord should not be held liable for the wrongful acts of a third party. *Id.* at 274; *see, e.g.*, Julius A. Bauer & Co. v. Chamberlain, 138 N.W. 903 (Iowa 1912).

[54] CUNNINGHAM, *supra* note 22, at 251. A leasehold "gives the right of possession or occupation" while licenses, easements, and profits "involve only rights of use." *Id.*; *see, e.g.*, Hi-Rise Laundry Equip. Corp. v. Matrix Props., Inc., 466 N.Y.S.2d 375 (1983) (finding that the right to occupy for ten years upon paying rent qualified as a leasehold).

[55] *See* MORRIS & MORRIS, *supra* note 15, at 57.

[56] *See* BUDDIN, *supra* note 43, at 39. Compared to those in military housing, renters were more satisfied with their "ability to upgrade their housing as they like (by about 7 percent)." *Id.*

[57] *See* 50 U.S.C.S. app. § 535 (LEXIS 2006). *See generally* Lieutenant Colonel J. Thomas Parker, *Legal Assistance Note: Servicemembers Civil Relief Act (SCRA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) Amendments and Updates*, ARMY LAW., Mar. 2005, at 22 (explaining recent updates in the SCRA); John Meixell, *Servicemembers Civil Relief Act Replaces Soldiers' and Sailors' Civil Relief Act*, ARMY LAW., Dec. 2003, at 38 (explaining the SCRA's replacement of the SSCRA).

[58] TRYBULA & HEWITT, *supra* note 10, at 159. A sample military clause is as follows:

> In the event the Tenant or spouse is or hereafter becomes a member of the United States Armed Forces, the Tenant may terminate this lease on thirty days' written notice to the Landlord in any of the following events:
>
> a. If the Tenant or spouse receives permanent-change-of-station orders to depart from the area where the premises are located.
>
> b. If the Tenant or spouse is relieved from active duty.
>
> c. If the Tenant or spouse has leased the property prior to arrival in the area and the orders are changed to a different area prior to occupancy of the property.
>
> d. If the Tenant or spouse is assigned government quarters.
>
> e. If the Tenant or spouse receives temporary-change-of-station (TCS) orders to depart from the area where the premises are located for more than ninety days.
>
> Rents due will be prorated if departure occurs during the middle of a month.

Id.

[59] *See* SHEETS, *supra* note 7, at 21-6.

[60] CUNNINGHAM, *supra* note 22, at 258. A lease "conveys a leasehold, a landed estate, and also contains more or less contractual undertakings, such as promises to pay rent, make repairs, pay taxes, procure insurance, and so forth." *Id.*

[61] MORRIS & MORRIS, *supra* note 15, at 57.

[62] CUNNINGHAM, *supra* note 22, at 258.

[63] MORRIS & MORRIS, *supra* note 15, at 57.

easily take the standard income tax deduction[64] rather than taking the time to itemize their tax deductions.[65] Third, renters often benefit from additional amenities, including pools, tennis courts, and common areas, which negates the need to travel and pay expenses for similar entertainment.

2. Disadvantages

Although renting a property simplifies life in many ways, renting also has numerous disadvantages, most involving landlord-tenant laws. First, renters lack the legal right to prevent rent increases following the initial lease period, to modify the property (e.g., installing new carpet or painting the walls a certain color), and to occupy the property beyond their lease termination date, possibly resulting in "involuntary relocation"[66] at the renter's expense.[67] Renters can minimize this relocation disadvantage, however, by signing longer leases (two or three years), including military clauses, and giving timely written notices. Second, landlords can evict renters under certain conditions, such as nonpayment of rent.[68] Fortunately, the SCRA reduces some of this risk by giving military renters and their spouses numerous protections against eviction.[69] For example, under the SCRA landlords must generally obtain a court order before evicting a military member or his dependents.[70] Third, unlike homeowners who can deduct mortgage interest as an itemized income tax deduction, renters cannot deduct their rent payments.[71] Fourth, renters do not build equity and, as a result, cannot borrow against home equity if the need arises.[72] Fifth, renters do not have the same degree of privacy as homeowners because landlords may access the property in certain situations,[73] such as to prevent pests and to show the property to prospective renters.[74] For those servicemembers who feel constrained by these disadvantages and find renting too expensive, living in military housing may be a viable alternative.

C. Living in Military Housing

1. Advantages

Compared to renting, living in military housing may significantly reduce a servicemember's overall expenses and result in significant financial savings. According to a RAND Survey of Military Member's Housing Choices and Preferences, economics has been "the primary reason" families have decided to live in military housing.[75] Historically, when compared to military housing, renters in the civilian community have had to pay $167 more per month, while homeowners have had to pay $356 more per month.[76] This is not surprising because housing allowances were not "designed"[77] to cover total housing

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[64] *See* I.R.C. § 63(c) (LEXIS 2006). For most people, the 2005 standard deduction is $5000 for single or married filing separately, $10,000 for married filing jointly or qualifying widow(er) with dependent child, or $7300 for head of household. PUB. 17, *supra* note 9, at 133.

[65] *See* PUB. 17, *supra* note 9, at 133. "You should itemize deductions if your total deductions are more than the standard deduction amount. Also, you should itemize if you do not qualify for the standard deduction . . . ." *Id.* at 132.

[66] NISSENBAUM, *supra* note 4, at 329.

[67] *See* MORRIS & MORRIS, *supra* note 15, at 57. Renters may want to find rent controlled accommodations to "hold down living expenses." *Id.*

[68] *See* CUNNINGHAM, *supra* note 22, at 258. State statutes generally give landlords the power to terminate a lease "on account of the tenant's failure to pay rent or, more or less, to perform other covenants." *Id.*

[69] *See* 50 U.S.C.S. app. § 531 (LEXIS 2006).

[70] *Id.* In general, a landlord may not evict a servicemember or his dependents from their primary residence when their monthly rent does not exceed $2400, adjusted for inflation for years after 2003 by the consumer price index housing component, except by court order. *Id.*

[71] NISSENBAUM, *supra* note 4, at 329.

[72] *Id.*

[73] CUNNINGHAM, *supra* note 22, at 274.

[74] TRYBULA & HEWITT, *supra* note 10, at 158. *See supra* note 22 and accompanying text.

[75] BUDDIN, *supra* note 43, at 29. "Security, convenience for work, and availability were the next most common reasons for choosing to live on-base." *Id.* at 11. "Joint-military couples were 14 percent more likely to prefer living in the civilian community, where they can combine their two allowances to afford good housing." *Id.* at 17. "[S]ervice personnel do not seem to view many of the benefits that have traditionally been associated with on-base housing (e.g., acculturation of junior personnel, support for families whose military member is deployed or simply gone a lot, fostering military values) as critical." *Id.* at 29. "Furthermore, members believe that their families are as well supported off-base as they are on-base." *Id.* For example, only twenty-six percent of military housing residents "felt able to count on their neighbors" while about thirty-four percent of homeowners were "confident about getting assistance from neighbors." *Id.* at 38. In short, "without the economic benefit, most military members see no compelling reason to live on-base." *Id.* at 29.

[76] *Id.* at 11 (measuring differences in cost based on numerous surveys taken during the 1990s).

costs.[78] Fortunately, in 2000, the Department of Defense and Congress "adopted a five-year plan to close a 19 percent gap between BAH [basic allowance for housing] rates and local rental costs nationwide."[79] Theoretically, this plan was suppose to eliminate out-of-pocket costs by 2005.[80]

The degree of financial savings from not having to pay rent and utilities, however, is only the historical principal advantage. Some servicemembers benefit from not receiving BAH, which might otherwise be included in child support calculations.[81] Other servicemembers benefit from not needing to pay renter's insurance due to automatic coverage by the Personnel Claims Act[82] for certain losses incident to service.[83] In addition, servicemembers living on post enjoy the intangible benefits of gate security, access to Department of Defense schools, and short commutes to work.[84] They also benefit from easy access to the Post Exchange and Commissary.[85]

2. Disadvantages

Living in military housing also involves some significant disadvantages, such as waiting for on-post housing to become available,[86] moving from off-post to on-post once housing becomes available, dealing with frequent substandard and untimely maintenance,[87] and accepting substandard properties in extremely poor condition.[88] In addition, similar to renting, servicemembers do not have total control of the premises.[89] For example, Army regulations and many local installation

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[77] *Id.* at 52. "The housing allowance is designed to cover 85 percent of an individual's housing costs. The 15 percent target absorption rate in part reflects the previously un-estimated but perceived value of the military housing benefit . . . ." *Id.*

[78] *See* MONEY & MOBILITY, *supra* note 51, at 9. As of 2002, "the allowance is meant to cover only about 89 percent of the average cost of housing in that area." *Id.* To determine the Basic Allowance for Housing (BAH) for a specific location, go to www.dtic.mil/perdiem/bah.html.

[79] Tom Philpott, *Stateside Housing Allowance Rises for 2006,* STARS & STRIPES, Dec. 27, 2005, at 1, *available at* http://www.military.com/features/0,15240 ,83894,00.html?ESRC=army-a.nl. Unfortunately, in 2006, some servicemembers who PCS will receive less BAH compared to their counterparts who are already assigned to the gaining unit due to the scheduled end of the BAH geographic rate protection program. *Id.* Geographic rate protection was a temporary program intended to ensure that newly arrived servicemembers would not receive less BAH than those already stationed at the same location. *Id.* "It was a tool to stabilize BAH rates until the gap between allowances and average local rental costs was closed . . . ." *Id.*

[80] *See* U.S. DEP'T OF VETERAN'S AFFAIRS, EVALUATION OF VA'S HOME LOAN GUARANTEE PROGRAM: FINAL REPORT APPENDICES (2004), *available at* http://www.homeloans.va.gov/pdf/final%20report%20appendices.pdf. "The National Defense Authorization Act for Fiscal Year 2001 repealed the requirement for members to absorb 15 percent of out-of-pocket costs, and the Secretary of Defense has pledged to increase BAH rates so that they will cover 100 percent of housing costs by 2005." *Id.*

[81] Pegler v. Pegler, 895 S.W.2d 580, 582 (Ky. Ct. App. 1995) (excluding from income receipt of on-installation housing for child support calculations). *Compare* I.R.C. § 134 (LEXIS 2006) (excluding certain military benefits from gross income for income tax purposes) *and* D.F. v. L.T., 903 So. 2d 657 (La. Ct. App. 2005) (excluding BAH from child support calculations), *with* Hixon v. Lundy, 2004 Iowa App. Lexis 1300 (Ia. Ct. App. 2004) (including BAH in child support calculations) *and* Hees v. Hees, 82 P.3d 107 (Okla. Civ. App. 2003) (treating receipt of on-installation housing as imputed income for child support calculations).

[82] 31 U.S.C.S. § 3721 (LEXIS 2006).

[83] *See* U.S. DEP'T OF ARMY, REG. 27-20, CLAIMS para. 11-5 (1 July 2003) (covering losses caused by fire, flood, hurricane, unusual occurrence, theft, or vandalism) [hereinafter AR 27-20]; U.S. DEP'T OF ARMY, PAM. 27-162, CLAIMS PROCEDURES para. 11-5 (8 Aug. 2003) [hereinafter DA PAM. 27-162]. Nevertheless, servicemembers may still want to buy renters insurance if they own valuable property. They may also want renters insurance if they fear the high burden of proof, administrative requirements, and depreciation required by military regulation. *See* AR 27-20, *supra* note 83, para. 11-14; DA PAM. 27-162, *supra* note 83, para. 11-14.

[84] *See* BUDDIN, *supra* note 43, at 37. "Most military housing residents have a commute of less than 10 minutes, and virtually all commute less than 30 minutes. Few renters or owners are within 10 minutes of work, but about 80 percent commute 30 minutes or less. Owners have somewhat longer commutes than do renters." *Id.*

[85] *See* TRYBULA & HEWITT, *supra* note 10, at 156.

[86] *See* BUDDIN, *supra* note 43, at 39. Over forty percent of renters listed unavailability of military housing when needed as their first or second most important factor in deciding to rent rather than live in military housing. *Id.*; *see also* U.S. DEP'T OF ARMY, REG. 210-50, HOUSING MANAGEMENT para. 3-8 (3 Oct. 2005) [hereinafter AR 210-50].

[87] The Army's Residential Communities Initiative (RCI) Quality Communities for Army Families, *Frequently Asked Questions*, http://www.rci.army.mil/ programinfo/faq.html (last visited Mar. 14, 2006) (on file with author). *See generally* U.S. DEP'T OF ARMY, ARMY FAMILY HOUSING MATER PLAN (AFHMP) FY 04-09, at 3, *available at* http//housing.army.mil/afh_plan.htm (discussing maintenance).

[88] *See* William M. Welch, *Army Housing No Longer Homely*, USA TODAY, Oct. 11, 2005, *available at* http://www.usatoday.com/news/nation/2005-10-11-army-housing_x.htm [hereinafter *No Longer Homely*]. "The homes for junior officers and enlisted soldiers with families had mold under the floors, rats in the walls and pipes, broken fixtures and the island's red dirt everywhere." *Id.* "The Pentagon says 200,000 of its 300,000 units of government-owned family housing (on and off base) are substandard and need replacement or major renovation. It was estimated that doing so would cost $16 billion and take 30 years." *Id. See generally* AR 210-50, *supra* note 86, para. 3-12 (discussing substandard housing assignments).

[89] *See* BUDDIN, *supra* note 43, at 41. Over thirty-five percent of renters and twenty-three percent of owners listed freedom from military housing rules and regulation as their first or second most important factor in deciding against living in military housing. *Id.*

regulations limit who can live in the property and how long visitors can stay.[90] Furthermore, the military can terminate a servicemember's housing privilege based on a change in a servicemember's status, "misconduct of the sponsor, his dependents, or guests,"[91] or repeated waste of utilities.[92] As a result, compared to renters, servicemembers in military housing reportably have been less satisfied[93] "concerning the rules governing their housing units (by about 15 percent)."[94] For those servicemembers frustrated by the strict rules and extremely poor condition of military housing, privatized housing may be an attractive alternative.

D. Living in Privatized Military Housing

1. Advantages

To address the significant shortcomings[95] and substandard conditions[96] of military housing, Congress privatized military housing, saving the government money while improving the quality of life for servicemembers and their dependents.[97] Passing the Military Housing Privatization Initiative in 1996,[98] Congress authorized the Pentagon to turn over the job of modernizing military housing to "real estate developers in the private sector."[99] In addition, privatized housing will provide other advantages, including free utilities based on average use,[100] low usage utility rebates, landlord-tenant law protections,[101]

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[90] *See* AR 210-50, *supra* note 86, para. 3-17.

[91] *Id.* para. 3-19.

[92] *Id.*

[93] *See* BUDDIN, *supra* note 43, at 13. "Homeowners are the most satisfied with the quality of their residence and members in military housing are the least satisfied." *Id.*

[94] *Id.* at 39

[95] *See id.* at 35.

[96] *See id.* at 37. The following paragraph explains the condition of military housing:

> Military housing is about 80 square feet smaller and 10 years older than civilian rental housing. Military housing has problems with pests and overall condition. Pests are a serious problem for 23 percent of families in military housing as compared with about 7 percent in civilian housing. About 66 percent of members in military housing rank the condition of their housing as good or very good compared to 79 and 95 percent of those living in rental and owned housing, respectively.

Id.

[97] *See id.* at 2-3, 25. In 1995, the average age of military housing was thirty-three years and much of the housing had already reached the end of its projected life. *Id.* at 2. The Congressional Budge Office recommended that the military should shift away from military housing because it was more costly than civilian housing alternatives. *Id.* at 2. To reduce the cost of military housing, DOD initiated privatization programs. *Id.* at 25; *see also* 10 U.S.C.S. § 2875 (LEXIS 2006) (authorizing the Secretary concerned to make investments in an eligible entity (e.g., a limited partnership) carrying out projects for the acquisition or construction of housing units suitable for use as military family housing).

[98] National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, § 2801(a)(1), 110 Stat. 186 (1996). This Act amended chapter 169 of title 10, U.S.C., by adding a new subchapter entitled Alternative Authority to Construct and Improve Military Housing (codified as amended at 10 U.S.C. §§ 2871-85). *Id.*

[99] *No Longer Homely*, *supra* note 88. *See generally* 10 U.S.C.S. § 2688 (discussing utilities); *id.* §§ 2871-85 (discussing housing issues including government investment for the acquisition or construction of housing for the military). Practically speaking, privatization of military housing means that servicemembers living in Oahu will have homes that will be fifty percent larger, that will include two-car garages, and that will be more modern and environmentally friendly. *No Longer Homely*, *supra* note 88. Army housing in Oahu will be equipped with "thin solar panels that will [make it] . . . the largest solar-powered community in the world." *Id.*

[100] *See, e.g.*, ARMY HAWAII FAMILY HOUSING, RESIDENT OCCUPANCY AGREEMENT para. 13, at 3. The Hawaii agreement includes the following terms:

> [A]fter the implementation of the Army's Resident Direct Pay Program . . . the Tenant will be personally responsible for the payment of some or all utilities servicing the Premises and an appropriate adjustment will be made to the amount of the allotment of the BAH for a utility allowance. The Tenant will be responsible for utility costs that are in excess of such utility allowance.

Id.

[101] *See* 42 U.S.C.S. § 3601. *But see* Memorandum, Principal Deputy Assistant Secretary of the Army Installations and Environment, to Director, Installation Management Agency, subject: Residential Communities Initiatives (RCI) Policy for Major Decision Authority (July 8, 2005) (giving garrison commanders authority to bar individuals or otherwise restrict individual's access to the installation as necessary to maintain good order and discipline).

and faster maintenance service standards.[102] Furthermore, servicemembers will experience little difference regarding funding of local moves[103] and will receive limited renters insurance.[104]

2. Disadvantages

Living in privatized housing involves some minor disadvantages. First, servicemembers may experience the constructive receipt of BAH, which may be included in child support calculations.[105] Second, they may have to pay for excessive use of utilities.[106] Third, they will fail to benefit from increases in BAH due to promotions or annual rate adjustments. Fourth, they will lack control over the premises, similar to living in military housing,[107] and will have to deal with the more complex procedures[108] involved in submitting cognizable claims to the government under the Personnel Claims Act.[109] All things considered, however, these disadvantages are relatively minor considering the overall benefits.

E. Considering Advantages and Disadvantages in the Planning Process

Given the many advantages and disadvantages of buying a home, potential homebuyers can easily become frustrated. The bottom line is that the longer a homebuyer plans on owning the same home, the more likely the homebuyer will outlast any negative market downturn and benefit from equity growth, appreciation, and income tax savings. To hold onto a home for a reasonable period of at least three to six years,[110] however, servicemembers must be confident they can maintain a stable income that can comfortably cover the mortgage, maintenance expenses, and property tax increases. Maintaining this level of confidence may be difficult if servicemembers are contemplating a change in employment or change in duty station.

In contrast, the shorter a servicemember plans on owning the same home, the more advantageous it is for him to rent housing or live in military or privatized housing. These three options give servicemembers different degrees of flexibility with regard to lease terms, military clauses, autonomy, and responsibility. In addition, these options offer differences in quality of life with regard to location, size, condition, and amenities of the property. By factoring in these numerous issues and prioritizing them based on their individual preferences, servicemembers can better determine which housing alternative best meets their short and long term needs and objectives.

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[102] *See, e.g.*, ARMY HAWAII FAMILY HOUSING, ARMY HAWAII FAMILY HOUSING RESIDENT GUIDE AND COMMUNITY STANDARDS HANDBOOK 34 (2005). In Hawaii, the standard for routine maintenance is a response within one working day and completion of the work within three working days. *Id.*

[103] *See* U.S. Dep't of Defense, Joint Federal Travel Regulation para. U5355-C3 (C229, 1 Jan. 2006) (authorizing appropriated funds to fund local moves).

[104] E-mail from Colonel Joseph Goetzke, Acting Chief, Personnel Claims and Recovery Division, United States Army Claims Service, to all Claims Judge Advocates (Sept. 8, 2005) [hereinafter Sept. 8 Message] (on file with author). "Most of the partnership agreements with the privatized housing contractors include a requirement for the contractor to provide some coverage for personal property as part of the lease. In some cases, this coverage is as much as $25,000." *Id.*

[105] *See supra* note 81. Servicemembers living in privatized housing receive BAH on their leave and earning statement (LES), even though the BAH is used to pay for the housing they receive. As a result, servicemembers are "in control" of the income and it is easy for some courts to include servicemembers' BAH in child support calculations.

[106] *See supra* note 100.

[107] *See* Captain Stacie A. Remy Vest, *Housing Privatization Initiative: A Guidance Document for Wading Through the Legal Morass*, A.F. L. REV. 7-11 (Spring 2002).

[108] E-mail from Colonel Joseph Goetzke, Acting Chief, Personnel Claims and Recovery Division, United States Army Claims Service, to all Claims Judge Advocates (Sept. 7, 2005) (on file with author). Military Housing Privatization Initiative (or Residential Communities Initiative) housing "will be considered to be provided in kind by the United States Government under 31 U.S.C. § 3721(b)(2)(e) if it is located within the perimeter of . . . military installations." *Id.* Specifically, for a claim to be cognizable, "the privatized quarters must be located within the boundaries of the installation"and servicemembers must first settle their claim with their private insurance carrier. *Id.* Sept. 8 Message, *supra* note 104. "The insurance that is provided as part of the lease of [privatized] quarters is considered to be private insurance and occupants of privatized quarters must file against this insurance coverage AND any other private insurance coverage they have before [the Army] can pay any part of their claim." *Id.*

[109] 31 U.S.C.S. § 3721 (LEXIS 2006).

[110] *See* Weston, *supra* note 5.

III. Step Two: Evaluating a Servicemember's Personal Situation, the Market, and the Property

If servicemembers determine that buying a home is an available and appropriate option, then servicemembers need to evaluate their personal situation, the specific property, and the market in light of property law, real estate financing law, consumer law, tax law, landlord-tenant law, family law, and bankruptcy law.

A. Personal Financial Analysis

Servicemembers who do not have the ability to pay for a home in cash need to ensure that they not only obtain a mortgage to buy a home, but that they also set their mortgage payments in an amount that will allow them to make timely monthly payments to keep the home. By making too small a down payment, overextending their finances, failing to plan for possible contingencies, and relying on significant asset appreciation, servicemembers increase their exposure to default, foreclosure, and bankruptcy.

1. Financing and Leverage

Unlike many other types of investment, real estate allows servicemembers to use the principal of leverage to buy nicer homes than would otherwise be affordable. Of course the disadvantage of benefiting from the use of other people's money is managing the risk involved. One way servicemembers can manage risk is by making an appropriate down payment.

a. The Down Payment

Servicemembers can get a higher return on investment capital if they make a small down payment and experience significant real estate appreciation.[111] The principal risk of such leverage, however, is the possibility of owing more on the mortgage than the property is worth (i.e., going "up-side down") and not being able to sell the home. This situation is made even worse when renting the property for a positive or break-even cash flow is not an option. As a result, it is useful for homeowners to have a loan-to-value ratio significant enough "to absorb a potential decline in house prices."[112] This loan-to-value amount is typically 80% of the value of the property.[113] One significant advantage of making a 20% down payment is that the borrower will not have to pay PMI.[114] For many buyers, however, making a 20% down payment is not a viable option. For homeowners unable to make a 20% down payment, a piggyback loan may be an alternative to avoid non-tax-

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[111] *See* SHEETS, *supra* note 7, at 2-4 to -6.

[112] Alan Greenspan, Chairman, Federal Reserve Board, Speech to the American Bankers Association Annual Convention, Palm Desert, California (Sept. 26, 2005) (transcript available at http://www.federalreserve.gov/boardDocs/Speeches/2005/200509262/default.htm). *See infra* note 113.

[113] *See* BLACK'S LAW DICTIONARY, *supra* note 14, at 949. Loan-to-value ratio is defined as:

> The ratio . . . [usually] expressed as a percentage, between the amount of a mortgage loan and the value of the property pledged as security for the mortgage. For example, an $80,000 loan on property worth $100,000 results in a loan-to-value ratio of 80% - which is . . . [usually] the highest ratio lenders will agree to without requiring the debtor to buy mortgage insurance.

Id. By lending a borrower 80% of the property's appraised value, the lender is protected in the event the property's value drops by up to 20%.

[114] JA 261, *supra* note 9, at 1-31. The following statement explains how PMI works:

> Under PMI, a private mortgage insurance company insures the loan, thus permitting the lender to go beyond its conventional loan limits of 75% to 80% loan-to-value ratio. In effect, PMI insures the lack of equity . . . . Borrowers are charged a premium for the PMI coverage. The premiums vary, but generally they are about 2% of the amount of the loan.

Id.

deductible PMI.[115] If servicemembers prefer paying PMI rather than acquiring a piggyback loan, they should terminate paying PMI as soon as they are eligible.[116]

b. The Impact of Marital Dissolution

The down payment is only the beginning of the financial analysis. Although it may seem unrelated to the home purchasing analysis, servicemembers need to understand the housing consequences involved in the unfortunate event of a divorce. These possible consequences relate to how servicemembers make a down payment and establish title. The effects of a divorce can be financially devastating and may potentially force the sale of a jointly held residence. Consideration of these effects is increasingly important because the probability of divorce in society is high[117] and the probability of divorce in the military is increasing.[118] Divorce is just another unfortunate possibility servicemembers should consider when attempting to minimize potential loss.

Servicemembers may consider divorce in their housing analysis for many reasons.[119] For example, in many common law property states where title determines ownership, servicemembers who use their separate property to buy marital homes may be deemed as having made an implied gift to their spouses, transforming separate property into marital property.[120] In states following the Sources of Funds Rule, however, servicemembers who can trace their separate property contributed toward a marital home are entitled to a proportionate interest in the property.[121] Furthermore, in community property states that follow the Inception of Title Rule,[122] homes purchased during marriage using separate property may be characterized as community property, with the separate property-contributing spouse receiving an equitable interest, assuming no

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[115] *See* Greenspan, *supra* note 112. "Highly levered home purchases tend to use so-called piggyback mortgages; that is, second liens originated at the time of purchase. These loans are popular, in significant part, because they avoid the non-deductible private mortgage insurance payments required on larger, single loans." *Id.* Although this technique avoids non-tax deductible PMI, it may increase the payments due on the loans as well as the administrative burdens of keeping the multiple loans current. These administrative burdens are important to consider in advance, especially if the loans may be sold to third party lenders. To ensure that the new lenders receive proper payment, servicemembers may want to acquire loans that guarantee that whoever services their loans will continue to service the loans after sale to a third party. For servicemembers who do not have the ability to make a 20% down payment nor have the desire to acquire a piggyback loan, other options may be preferable such as a VA loan. *See infra* note 166 and accompanying text.

[116] *See* 12 U.S.C.S. §§ 4901-02 (LEXIS 2006) (discussing how to terminate PMI). In general, borrowers can cancel PMI by submitting a written request to the servicer after reaching an eighty percent loan-to-value ratio, maintaining a good payment history, being current on mortgage payments, and satisfying other requirements of the holder of the mortgage. *See id.*; *see infra* note 157.

[117] Donna Miles, *Military Programs Aim To Reduce Military Divorce Rates*, http://www.pica.army.mil/Voice2005/050617/050617%20Divorce.htm (last visited Aug. 24, 2006) [hereinafter *Military Programs*]. Nationwide, approximately 45 to 50% of first marriages end in divorce and 60 to 70% of second marriages end in divorce. *Id.* Since divorces occur at different points during a marriage, it is useful to look at a population's per capita annual divorce rate. For example, the U.S. per capita divorce rate was .4%, .38%, .38%, and .37% in the years 2001, 2002, 2003, and 2004 respectively. Americans for Divorce Reform, Divorce Rates, http://www.divorcereform.org/rates.html (last visited Aug. 24,2006). For Army officers, the divorce rate was 2.1%, 1.9%, 3.3%, and 6.0% in the years 2001, 2002, 2003, and 2004 respectively. *See* E-mail from Debbie Eitelberg, Defense Manpower Data Center, to MAJ Samuel Kan (Mar. 15, 2005) [hereinafter DATA] (on file with author); *see also* Lisa Burgess, *Divorce Rate Among Active-Duty Army Officers, Enlisted Has Risen Dramatically*, STARS & STRIPES, June 9, 2005, *available at* http://www.military.com/NewContent/ 0,13190,SS_060905_Divorce,00.html (citing the same statistics). Combining the officers and enlisted of the Army, Air Force, Marine Corps, and Navy into a single population group, the group's divorce rate was 2.6%, 3.1%, 3.2%, and 3.6% in the years 2001, 2002, 2003, and 2004 respectively. *See* DATA, *supra* note 117.

[118] *Military Programs*, *supra* note 117. In fiscal years 2001, 2002, 2003, and 2004, the Army had 5600, 7000, 7500, and 10,477 divorces respectively among active duty forces. *Id.* Among its 56,000 married officers, the Army had 1900 and 3300 divorces in the fiscal years 2003 and 2004 respectively. *Id.* It is important to note that the military characterizes a servicemember's marital status as married if the servicemember has been divorced and later remarries. *See* Americans for Divorce Reform, Military Divorce Statistics, http://www.divorcereform.org/mil.html (last visited Aug. 24, 2006). This characterization makes it difficult to compare divorce statistics. One way to attempt a comparison is to count the number of divorces each year and calculate the percentage with respect to the population group. *See supra* note 117. *But see* e-mail from Debbie Eitelberg, Defense Manpower Data Center, to MAJ Samuel Kan (Mar. 15, 2005) (showing the Pentagon's unofficial 2005 statistics that the divorce rate among Army officers and enlisted declined to 2.3% and 3.6% respectively) (on file with author); Donna Miles, *Army Divorce Rates Drop as Marriage Programs Gain Momentum*, ARMED FORCES PRESS SERVICE, Jan. 27, 2006, *available at* http://www.defenselink.mil/cgi-bin/dlprint.cgi?http://www.defenselink.mil/news/Jan2006/ (emphasizing that in 2005, the Army divorce rate decreased from the spike in 2004).

[119] *See infra* p. 13 (discussing the source of the down payment) and p. 14 (discussing the source of mortgage payments).

[120] *E.g.*, Ardrey v. Ardrey, 2004 WL 1088385 (Ohio Ct. App. May 17, 2004); Norman v. Norman, 2003 WL 724677 (Tenn. App. Mar. 4, 2003); Carter v. Carter, 419 A.2d 1018 (Me. 1980).

[121] *E.g.*, Chenault v. Chenault, 799 S.W.2d 575 (Ky. 1990) (establishing a preponderance of the evidence standard for tracing marital property back to separate property); Harper v. Harper, 448 A.2d 916 (Md. 1982) (demonstrating the Sources of Funds Rule); Duffey v. Duffey, 2002 Ohio App. LEXIS 781 (Ohio Ct. App. 2002).

[122] *E.g.*, Fisher v. Fisher, 383 P.2d 840 (Idaho 1963); Harper, 448 A.2d 916 (demonstrating the Sources of Funds Rule); Duffey, 2002 Ohio App. LEXIS 781.

commingling occurred.[123] In short, unless the real estate transaction is handled properly from the beginning, servicemembers contributing separate property to a marital home may risk losing their previously characterized separate property in a later divorce.

To minimize the risk of losing separate property in a divorce, married servicemembers may consider using marital property when making the down payment on a marital residence. If they use separate property for the down payment, servicemembers need to understand the risks involved and document the financial transactions for tracing purposes in the event of divorce. Servicemembers contemplating both marriage and the purchase of a home can simplify these tracing requirements by executing a valid written and signed prenuptial agreement that clearly defines the parameters of marital and separate property and establishes the governing choice of law.[124] Of course, the prenuptial agreement might be successfully challenged if the agreement suffers from a lack of full disclosure,[125] if the agreement is not voluntary,[126] or if the agreement is otherwise unconscionable.[127]

c. The House Payment

Having too large a house payment can leave servicemembers with "too little money for other goals [such as]: retirement, vacations, college funds for the kids . . . [and leave them] vulnerable to foreclosure and bankruptcy."[128] In general, lenders recommend that housing expenses, including the mortgage payment, homeowners insurance, and property taxes, not exceed 28% of gross monthly income, while total payments on all debt including credit card debt, car loans, and student loans not exceed 36% of gross income.[129] These guideline figures are subject to many factors, such as expected maintenance and repair costs, job and income stability and growth, and anticipated inflation and real estate appreciation.[130] Additional factors[131] homeowners may consider include plans to have children, to send children to college, and to retire.[132] In today's world of dual income families, mortgage payments often rely on both incomes leaving "no one on the sidelines to take up the slack" in case of a job loss such as when one partner decides to stay home to raise children.[133]

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[123] *E.g.*, Holland v. Holland, 35 P.3d 409 (Wyo. 2001); *In re* Marriage of Mardsden, 130 Cal.App.3d 426 (1982) (showing that commingling of separate and community property results in community property); McCurdy v. McCurdy, 372 S.W.2d 381 (Tex. Civ. App. 1963).

[124] UNIF. PREMARITAL AGREEMENT ACT § 6(a) (1983) [hereinafter UPAA] For example, a prenuptial agreement can specify that a servicemember's salary, real property titled in the servicemember's name during the marriage, and any appreciation of the property during the marriage are separate property. The servicemember can make the down payment as well as all subsequent expenses using the servicemember's salary, eliminating the tracing concerns.

[125] *See id.*; Peters-Riemers v. Riemers, 644 N.W.2d 197 (N.D. 2002).

[126] UPAA § 6(a), *supra* note 124. Servicemembers may want to ensure their spouses have independent legal advice before entering into a prenuptial agreement. Although often not required, providing consideration to spouses in exchange for entering into the agreement can be one way of protecting the agreement from challenge.

[127] *E.g.*, *In re* Marriage of Pownall, 5 P.3d 911 (Ariz. Ct. App. 2000); Hardee v. Hardee, 588 S.E.2d 264 (S.C. Ct. App. 2001).

[128] Liz Pulliam Weston, *Don't Bite Off Too Much House*, MSM MONEY, http://articles.moneycentral.msn.com/Banking/HomebuyingGuide/Don'tBiteOffTooMuchHouse.aspx (last visited Aug. 24, 2006) [hereinafter *Too Much House*].

[129] *Id.*; *see also* NISSENBAUM, *supra* note 4, at 332. Servicemembers should use their BAH amount as a guide for planning their housing expenses including their mortgage payment. However, due to tax savings, equity growth, and other factors such as cost of living allowances, servicemembers may determine that they can afford to spend more than their BAH amount to cover their housing expenses.

[130] *Too Much House*, *supra* note 128.

[131] *See id.*

> A much bigger proportion of the workforce was covered by traditional defined-benefit pensions 30 years ago -- which means they didn't have to save massive amounts of money on their own to have a decent retirement. Today, the onus is typically on you to carve enough out of your budget to fund 401(k)s and IRAs.

Id. *See infra* note 132.

[132] Susan Schmidt Bies, Governor, Fed. Reserve Bd., Speech at the Canisius College Richard J. Wehle School of Business Community Business Luncheon, Buffalo, New York (Apr. 18, 2005) (transcript available at http://www.federalreserve.gov/boarddocs/speeches/2005/20050418/default.htm)). "Data from the SCF [Survey of Consumer Finances] indicate that among workers with a retirement savings plan, nearly 60 percent of workers aged 25 to 34 were covered by a defined-benefit plan in 1989; by 2001, this share had declined to 31 percent." *Id.* Fortunately for military members who retire after serving twenty years of active duty, they enjoy a defined-benefit pension.

[133] *Too Much House*, *supra* note 128.

However, the amount of the mortgage payment is only part of the analysis. Just as servicemembers may consider the source of the down payment, servicemembers may contemplate the source of monthly mortgage payments as well as repairs. For example, if a separate property residence appreciates as a result of marital labor or funds, the appreciation of the residence may be considered a marital asset.[134] To ensure clarity, servicemembers contemplating both marriage and buying a house may consider defining the parameters of marital and separate property appreciation in a prenuptial agreement.[135] Meanwhile, married servicemembers without a prenuptial agreement may consider ensuring that they use only marital funds to make mortgage payments and repairs to marital property and separate funds to make similar payments on separate property. Once servicemembers determine what type of funds they will use to make payments, they need to secure the most appropriate mortgage and interest rate for their situation.

2. The Mortgage Analysis

Although navigating through the mortgage waters is complex, servicemembers should take the time to ensure that they take the appropriate steps to set themselves up for success. As Federal Reserve Governor Susan Schmidt Bies explains,

> When looking at different loan products, consumers should consider how long they plan to own their home, expectations of future income, their stage of life cycle, and broader financial obligations in choosing among mortgage alternatives. For example, if consumers want to pay off their mortgages before retirement, they must determine if the monthly payment will fully amortize the loan by the target date. If homeowners plan to move in three years, then they should compare prepayment penalties, if any, and interest rates among their mortgage alternatives . . . . [Unfortunately,] some consumers do not actively shop for a lender or a mortgage, and they do not compare loan terms in light of their personal circumstances.[136]

Failing to take the proper steps can increase financial risk. To minimize this risk, servicemembers should initially address their credit issues. Then, they should determine the type of mortgage that makes them feel the most secure. Finally, they should select the best length of mortgage for their situation.

a. Applying for Credit

To begin, servicemembers need to understand the importance of building and maintaining a good credit history. Mortgage interest rates and loan approval will depend upon the servicemember's credit[137] and bankruptcy scores.[138] First,

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[134] *E.g.*, Chapman v. Chapman, 866 So. 2d 118 (Fla. Dist. Ct. App. 2004) (discussing marital appreciation of separate assets as a result of marital labor and marital funds); Cisneros v. Cisneros, 831 So. 2d 257 (Fla. Dist. Ct. App. 2002) (holding that a husband's physical labor to improve his spouse's residence resulted in marital appreciation). *But see* Fowlkes v. Fowlkes, 590 S.E.2d 53 (Va. Ct. App. 2003) (holding that a husband's $30,000 separate property contribution to his spouse's house did not convert his spouse's home into marital property); Brown v. Brown, 58 Ariz. 333, 119 P.2d 938 (1941) (holding that the title to the improvements follow the land).

[135] *See supra* p. 13.

[136] Susan Schmidt Bies, Fed. Reserve Bd., Speech at the Eller College of Management Distinguished Speaker Series, Tucson Arizona: Economic Outlook and Development in Mortgage Markets (Jan. 18, 2007) (transcript at http://www.federalreserve.gov/boarddocs/speeches/2007/20070118/default.htm).

[137] *Anatomy of a Credit Score*, BUSINESS WEEK, *available at* http://moneycentral.msn.com/content/Banking/Yourcreditrating/P136689.asp?Printer (last visited Aug. 24, 2006) [hereinafter *Credit Score*]. The following example shows the importance of your FICO (Fair Isaac & Co.) score:

> On a $350,000, 30-year fixed mortgage, you'll pay 6.24% in interest and $2,153 a month if you score between 720 and 850. If your [FICO] score drops to between 620 and 674, your interest rate jumps to 8.05%, and your monthly cost rises to $2,581. You will pay an additional $154,131 over the life of the loan, according to a calculator on myfico.com.

Id. The credit bureaus determine credit scores by taking into account the following factors: payment history (35%), debt (30%), length of credit history (15%), new credit (10%), and types of credit used (10%). *Id.*

[138] *This Secret Score Can Hurt Your Credit*, Bankrate.com, http://moneycentral.msn.com/content/Banking/Yourcreditrating/P137322.asp?Printer (last visited Aug. 24, 2006). Bankruptcy scores start in the negative numbers and increase to approximately 2000. *Id.* Bankruptcy scores are complex and use advanced math and data analytics to look ahead to see how likely a consumer is to file for bankruptcy. *Id.* In contrast, credit scores look at a consumer's past history of paying bills. *Id.* Although bankruptcy risk scores have been used for decades, they have not been made available to the general public because "no one wants to disclose the model . . . [and] give away the value of the research . . . conducted." *Id.* "However, Experian is considering making its [bankruptcy] score available to consumers." *Id.* at 2. "The things that improve your bankruptcy risk score are the same ones that improve your credit score: Pay your bills on time and apply for credit sparingly." *Id.* In short, consumers should strive to maintain a high credit score and a low bankruptcy score, by building and maintaining a good credit history. *See id.*

servicemembers should obtain and review their credit score[139] and credit report[140] well in advance of purchasing a home. The Fair Credit Reporting Act allows consumers to obtain a free credit report once a year upon the consumer's request and under certain circumstances, such as when an application for credit is denied.[141] Second, consumers should take appropriate actions[142] to correct errors[143] that they discover on their reports.[144] Third, consumers should pay off existing debt, cancel unnecessary credit cards, and pay all loan installments on time.[145] Fourth, consumers lacking a good credit history should build a credit history by opening savings and checking accounts and taking out and paying small loans.[146] By taking these steps to build a good credit history, servicemembers can maximize their financing options and take full advantage of the benefits of adjustable-rate and fixed-rate mortgages.

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[139] Liz Pulliam Weston, *7 Fast Fixes for Your Credit Score*, MSM MONEY, http://moneycentral.msn.com/content/Banking/Yourcreditrating/P116527.asp?Printer (last visited Aug. 25, 2006). "Despite all the media attention given to free credit reports, you still have to pay to find out your credit score, the three-digit number ranging from 300 to 850 that is the key to your borrowing costs." *Id.* "For the most detailed explanations on your FICO scores, go to the credit education area at [http://www.myfico.com/]. A score from one credit bureau costs $14.95, all three are $44.85. It's useful to buy all three because large lenders either average the scores or take the middle one." *Credit Score*, *supra* note 137.

[140] Federal Trade Commission, *Building a Better Credit Report*, May 2006, http://www.ftc.gov/bcp/edu/pubs/consumer/credit/cre03.htm [hereinafter *Better Credit Report*]. Consumers who want to get a copy of their credit report from one of the three major credit bureaus can call Equifax at 800-685-1111, Experian at 888-397-3742, or TransUnion at 800-916-8800, or review their websites at www.equififax.com, www.experian.com, and www.tuc.com. *Id.* Although, each of the three national credit reporting agencies sell consumer credit reports, consumers are better advised to get the same reports for free at www.annualcreditreport.com or by calling 1-877-322-8228. "When you request a free credit report, each bureau will offer to calculate a credit score for $6.95. Experian and TransUnion use proprietary formulas; Equifax uses FICO scores. [Unfortunately the information is not comprehensive and] . . . lenders are less likely to look at these scores." *Credit Score*, *supra* note 137. *But see Credit Bureaus Create FICO Score Rival*, http://moneycentral.msn.com/content/Banking/Yourcreditrating/P147161.asp?Printer (last visited Aug. 25, 2006) (discussing the new "VantageScore," which Equifax, Experian, and TransUnion will use to provide consumers more consistent credit scores between the bureaus).

[141] 15 U.S.C.S. § 1681j(a)(1)(A) (LEXIS 2006). "In general. All consumer reporting agencies described in subsections (p) and (w) of section 603 [15 U.S.C. § 1681a] shall make all disclosures pursuant to section 609 [15 U.S.C. § 1681g] once during any 12-month period upon request of the consumer and without charge to the consumer." *Id.*

[142] *Better Credit Report*, *supra* note 140. A sample dispute letter is as follows:

> I am writing to dispute the following information in my file. The items I dispute also are encircled on the attached copy of the report I received.
>
> This item (identify item(s) disputed by name of source, such as creditor or tax court, and identify type of item, such as credit account, judgment, etc.) is (inaccurate or incomplete) because (describe what is inaccurate or incomplete and why). I am requesting that the item be deleted (or request another specific change) to correct the information.
>
> Enclosed are copies (use this sentence if applicable and describe any enclosed documentation, such as payment records, court documents) supporting my position. Please reinvestigate this (these) matter(s) and (delete or correct) the disputed item(s) as soon as possible.

Id.

[143] MORRIS & MORRIS, *supra* note 15, at 52. Some common errors include mistakes due to confusion of a consumer with someone with a similar name or social security number, failing to remove incorrect information after the issue has been investigated and resolved in the consumer's favor, and failing to add information supplied by the consumer or a consumer's creditor. *Id.*

[144] 15 U.S.C.S. §1681i(a)(1)(A). The statute states:

> In general. Subject to subsection (f), if the completeness or accuracy of any item of information contained in a consumer's file at a consumer reporting agency is disputed by the consumer and the consumer notifies the agency directly, or indirectly through a reseller, of such dispute, the agency shall, free of charge, conduct a reasonable reinvestigation to determine whether the disputed information is inaccurate and record the current status of the disputed information, or delete the item from the file in accordance with paragraph (5), before the end of the 30-day period beginning on the date on which the agency receives the notice of the dispute from the consumer or reseller.

Id.

[145] SHEETS, *supra* note 7, at 3-8; *see also* TRYBULA & HEWITT, *supra* note 10, at 74. Although having a few credit cards is very useful to establish a good credit history, to facilitate purchases, and to earn frequent flyer miles or other perks, having too many credit cards and using too much available credit can be dangerous. Experian has "identified two groups of heavy card users: the 14% who own more than 10 cards and another, at times overlapping, 14% who use more than 50% of the credit available to them. This last group alone holds an average of nearly seven cards each …. [and] have credit scores about 30 points below the national average." Marilyn Lewis, *1 in 7 Americans Carry 10 or More Credit Cards*, http://articles.moneycentral.msn.com/Banking/CreditCardSmarts/1In7AmericansCarries10CreditCards.aspx (last visited Feb. 16 2007).

[146] SHEETS, *supra* note 7, at 3-10. Those without a credit history can obtain a certificate of deposit (CD) at a bank and then use the CD as collateral for a six-month or longer installment loan from that bank. *Id.* The borrower can invest the money in an interest-bearing account, use the money to pay the loan early, and build a credit history at little cost. *Id.* After paying the loan off early, the borrower can go back to the same bank and apply for an unsecured loan. *Id.* After paying off the unsecured loan, the borrower can repeat the procedure asking for a larger loan each time. *Id.* By practicing this "Credit Pursuit Strategy" at numerous banks simultaneously, a borrower can build a huge unsecured line of credit. *Id.*; *see also* TRYBULA & HEWITT, *supra* note 10, at 72.

b. Fixed-Rate or Adjustable-Rate Mortgage (ARM)

Fixed-rate mortgages provide the primary benefit of comfort because they establish "predictable monthly payments"[147] of principal and interest over the life of the loan. As a result, they are "ideal for purchasers who have a stable income and want predictable housing costs."[148] Fixed-rate mortgages are probably the "best choice" if the borrower plans on keeping the mortgage for at least five years, and the borrower feels comfortable with the interest rate and monthly payment.[149] For convenience, an amount can be included in the mortgage payment to cover taxes and insurance costs, which will be kept in escrow until the appropriate due date.[150] Since taxes and insurance tend to increase over time, borrowers should plan on having this payment increase gradually over the life of the loan.

In contrast to fixed-rate mortgages, adjustable or variable-rate mortgages charge interest rates that "change at intervals determined at the beginning of the loan."[151] Since the interest rate changes along with market conditions, lenders can shift significant risk to the borrower and, as a result, charge lower interest rates at the beginning of the loan.[152] Since servicemembers move frequently, they may plan to keep their property for only a few years.[153] As a result, they may be able to benefit from ARMs by paying lower interest rates at the beginning of loans and selling their properties before their interest rates increase.[154] Borrowers using ARMs can manage risk by ensuring that their ARMs are tied to an appropriate adjustment index[155] and have conservative adjustment caps[156] on possible interest rate increases.

c. The Federal Government's Involvement in the Mortgage Market: Conventional, Veterans Administration (VA), and Federal Housing Administration (FHA) Loans

Conducting the mortgage type analysis, servicemembers should consider VA and FHA loans. For those who can afford to make a twenty percent down payment and avoid PMI,[157] conventional loans are generally the best alternative and the most common.[158] Conventional loans involve "a financial institution lend[ing] its own money and tak[ing] the entire risk of

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147 NISSENBAUM, *supra* note 4, at 332.

148 TRYBULA & HEWITT, *supra* note 10, at 173.

149 *Id.*

150 *Id.* Escrow is defined as "An account held in trust or as security . . . . The general arrangement under which a legal document or property [e.g., money] is delivered to a third person [e.g., the mortgage servicer] until the occurrence of a condition [e.g., the tax bill due date]." BLACK'S LAW DICTIONARY, *supra* note 14, at 564.

151 TRYBULA & HEWITT, *supra* note 10, at 173. An Adjustable-Rate Mortgage (ARM) is defined as: "A mortgage in which the lender can periodically adjust the mortgage's interest rate in accordance with fluctuations in some external market index. - Abbr. ARM. - Also termed variable-rate mortgage; flexible-rate mortgage." BLACK'S LAW DICTIONARY, *supra* note 14, at 1027. The adjustment period is defined as follows:

> [T]he length of time between adjustments to the interest rate charged . . . . [Borrowers] will generally be able to choose adjustment periods ranging from six months to three years. Mortgages with the shortest adjustment period will have the lowest initial rate and the fewest points, since the short adjustment period makes them less risky to the lender.

TRYBULA & HEWITT, *supra* note 10, at 174. In addition, consumers need to understand that their loan may be re-amortized over the life of their loan resulting in higher mortgage payments. *See generally* THE FEDERAL RESERVE BOARD, CONSUMER HANDBOOK ON ADJUSTABLE-RATE MORTGAGES, (2006), *available at* http://www.federalreserve.gov/pubs/arms/armsbrochure.pdf (informing consumers about the numerous intricacies and dangers of ARMs and their variations).

152 *See* TRYBULA & HEWITT, *supra* note 10, at 174.

153 *See id.*

154 *See id.*

155 *See id.* "Adjustment indexes are standard, commonly reported interest rates that determine your interest rate." *Id.* If rates are expected to increase, "a long-term index (such as the Treasury index)" is preferred since they adjust more slowly. *Id.* In contrast, if rates are expected to decrease, "a shorter-term index (such as the Cost of Funds index)" is preferred since they adjust more quickly. *Id.*

156 *See id.* The following additional information is helpful for understanding interest caps with respect to loans:

> Most loans have a cap on the amount the interest rate can increase each adjustment period (usually 2 percent) and over the life of the loan (usually 6 percent). So a one-year adjustable loan with an initial 7 percent rate [using these sample caps] could increase only to 9 percent at the end of the first adjustment period and to 13 percent over the life of the loan.

Id.

157 *See generally* NELSON & WHITMAN, *supra* note 18, at 773. "Several states have statues requiring lenders to notify borrowers at closing of the right to cancel [PMI] when a specified loan-to-value ratio has been achieved." *Id.* at 786.

158 *See id.* at 775 (explaining that in 1991, 87% of home loans were conventional loans while FHA and VA loans were about 8% and 4% respectively).

loss"[159] for the amount loaned. While minimizing total cost, conventional loans provide an equity cushion in the event of a downturn in the real estate market or a loss or reduction of income due to unemployment, change in employment, divorce, or disability.[160] For those unable to make a substantial down payment, however, VA and FHA loans may enable less wealthy borrowers to purchase a home.[161] To accomplish this objective, the FHA[162] insures loans rather than lending money.[163] Similarly, VA loans "guarantee a partial repayment"[164] to a financial institution in the event of default by the borrower, which generally results in lower interest rates for the borrower.[165]

Compared to conventional loans, VA loans provide numerous advantages, such as little to no down payment, limitations on closing costs, no PMI, lower credit standards, default assistance to avoid foreclosure, and benefits for veterans with certain disabilities.[166] Other advantages include negotiable interest rates, required appraisals, choice of repayment plans, assumable mortgages, no prepayment penalties, and reasonable loan amounts.[167] The disadvantages include eligibility[168] requirements,[169] funding fees,[170] and higher default rates.[171]

For those who do not qualify for a VA loan or who are already using their VA loan eligibility, FHA loans may be an attractive alternative.[172] Unlike VA loans that guarantee "only a portion of the loan," FHA loans insure[173] "the full amount of selected loans made by private lenders."[174] Unfortunately, FHA loans generally require a larger down payment[175] than VA

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[159] TRYBULA & HEWITT, *supra* note 10, at 176.

[160] *See* U.S. DEP'T OF VETERAN'S AFFAIRS, EVALUATION OF VA'S HOME LOAN GUARANTEE PROGRAM: FINAL REPORT ES-7 (2004), http//www.homeloans.va.gov/pdf/final%20report.pdf [hereinafter FINAL REPORT].

[161] *See id.* at 2-8. While "the VA Home Loan program is intended to provide a benefit to veterans . . . HUD's loan program is intended to fulfill social objectives, that is, help low-income and minority groups gain access to loan markets that they might not have due to low income or discrimination." *Id.*

[162] *See* The National Housing Act, 12 U.S.C.S. §§ 1701-42 (LEXIS 2006) (establishing The Federal Housing Administration (FHA) in 1934).

[163] *See* NELSON & WHITMAN, *supra* note 18, at 773; *see also* JA 261, *supra* note 9, at 1-32. Federal Housing Administration loans are loans insured by The Federal Housing Administration, which is "now a part of the Department of Housing and Urban Development (HUD)." JA 261, *supra* note 9, at 1-32.

[164] JON W. BRUCE, REAL ESTATE FINANCE, IN A NUTSHELL 35 (4th ed. 1997). "The predecessor of the present Department of Veterans Affairs, the Veterans Administration, was given authority to guarantee home loans for GI's by the Servicemen's Readjustment Act in 1944." NELSON & WHITMAN, *supra* note 18, at 773; *see* 38 U.S.C.S. § 3703 (LEXIS 2006).

[165] *See* TRYBULA & HEWITT, *supra* note 10, at 178.

[166] *See* FINAL REPORT, *supra* note 160, at 2-8.

[167] *See* VETERANS BENEFITS ADMINISTRATION, PAM. 26-91-1, VA HOME LOANS: A QUICK GUIDE FOR HOMEBUYERS & REAL ESTATE PROFESSIONALS (Feb. 2005) [hereinafter VA PAM. 26-91-1]. "Loan maximum may be up to 100 percent of the VA-established reasonable value of the property. Due to secondary market requirements, however, loans generally may not exceed $359,650." *Id.*

[168] *See* 38 U.S.C.S. §§ 3701-02 (LEXIS 2006).

[169] *See* VA PAM. 26-91-1, *supra* note 167, at 3. In general, to be eligible, veterans must have the following:

> [A]ctive duty service, that was not dishonorable, during World War II and later periods . . . . Veterans with service only during peacetime periods and active duty military personnel must have had more than 180 days' active service. Veterans of enlisted service which began after September 7, 1980, or officers with service beginning after October 16, 1981, must in most cases have served at least 2 years.

Id.

[170] *See id.* at 6 (explaining funding fees).

> A funding fee must be paid by all veterans, except those exempt due to receipt of disability compensation, using the VA home loan program. The funding fee can range from 0.5 percent for Interest Rate Reduction Refinancing Loans (IRRRL) to 3.3 percent for veterans who are subsequent users of the VA home loan program. For all VA loans, the funding fee may be paid in cash or included in the loan.

Id.

[171] *See* FINAL REPORT, *supra* note 160, at ES-7. In 1988, the percentage of delinquent VA loans was between 6 and 7% compared to 2 to 4% for conventional loans. *Id.* In 2003, the VA delinquency rate increased to between 7 and 9% while the delinquency rate of conventional loans increased by only "a fraction of a percentage point." *Id.*

[172] *See* TRYBULA & HEWITT, *supra* note 10, at 179.

[173] *See* 12 U.S.C.S. § 1709 (LEXIS 2006).

[174] FINAL REPORT, *supra* note 160, at ES-7.

[175] TRYBULA & HEWITT, *supra* note 10, at 179. The "FHA requires 3 percent of the value of the property for loans less than $50,000. For loans greater than $50,000, FHA requires a down payment of approximately 5 percent of the value of the property." *Id.*

loans and charge a mortgage insurance premium on the outstanding balance of the loan.[176] In addition, FHA loans have a significantly higher delinquency rate than both conventional and VA loans, and the FHA loan delinquency rate has been rising. For example, from 1998 to 2003, the percentage of delinquent FHA loans increased from around seven percent to almost thirteen percent.[177]

Realizing the high delinquency rate of VA and FHA loans, servicemembers need to beware of excessive leverage and be cognizant of the factors that contribute to increased delinquency, foreclosure, and bankruptcy. Some of these factors include being on active duty, being young, failing to qualify for a conventional mortgage, having a high loan-to-value ratio, and having a lower income.[178] Unfortunately, these factors are typical of most active duty servicemembers. In other words, the statistics show that based on the eligibility and selection criteria, FHA loans are more risky than VA loans, which are more risky than conventional loans. Servicemembers can use each of these tools effectively or at their own peril depending on how they structure their real estate transaction and manage their financial portfolios. In addition, borrowers can manage risk by securing shorter mortgages if they can afford the higher payments.

d. Mortgage Length

The most common mortgages have been longer thirty-year and shorter fifteen-year mortgages. While thirty-year mortgages allow borrowers to buy more expensive houses, pay lower monthly payments, and lock in interest rates over a longer period of time, fifteen-year mortgages allow borrowers to rapidly build up equity, significantly reduce the total amount of interest paid on their loan, and pay off their mortgage in half the time.[179] Borrowers should choose fifteen-year mortgages if they can manage the higher monthly payments and cannot achieve a higher after-tax return by investing elsewhere.[180] In contrast, borrowers should choose thirty-year mortgages if funds are tight, if they need the tax deduction, or if they have enough discipline to invest the difference between the fifteen and thirty-year mortgage payments in an investment with a guaranteed[181] higher after-tax rate of return.[182] By investing the payment difference for fifteen years, borrowers could pay off the balance on their thirty-year mortgage in fifteen years and have savings left over.[183]

e. Creative and Possibly Dangerous Financing

Servicemembers need to select the right loan so that they can continue making payments over the long term.[184] Servicemembers must not rely on an "unrealistic rate of home appreciation" when choosing their loan.[185] Purchasing real estate using novel mortgages, such as interest-only mortgages, mortgages with forty-year amortization schedules, and option

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176 *See* JA 261, *supra* note 9, at 1-34. *See generally* NELSON & WHITMAN, *supra* note 18, at 776.

177 FINAL REPORT, *supra* note 160, at ES-7.

178 *See id.*

179 *See* NISSENBAUM, *supra* note 4, at 333.

180 *See id.* at 334. For example, the monthly payment difference between a fifteen-year (at 8.25% interest) and thirty-year (at 8.5% interest) mortgage of $150,000 would be approximately $302 per month. *Id.* at 333. The difference in actual interest paid on the loans is $153,000. *Id.* In short, a servicemember could choose a thirty-year mortgage rather than a fifteen-year mortgage and invest the $302 per month difference in a lucrative alternative investment. If the servicemember experienced success in the alternative investment, the servicemember could use the returns to pay off the thirty-year mortgage early. Of course, the alternative investment might not have the same tax benefits as interest payments on a mortgage. *See id.*

181 *See, e.g.*, Defense Finance and Accounting Service, *A Savings Plan for Deployed Service Members*, Mar. 18, 2004, http://www.dod.mil/dfas/news/releases/2004/04-14.htm (allowing deployed servicemembers to contribute up to $10,000 to a Savings Deposit Program and earn a guaranteed 10% annual return).

182 *See* TRYBULA & HEWITT, *supra* note 10, at 179-80.

183 *See id.*; *see supra* note 180.

184 Olson, *supra* note 1. To understand the importance of sustaining payments, homeowners should realize the following:

> Foreclosure rates in some areas have increased dramatically since the early 1990s -- the same time frame in which the subprime market experienced its most rapid growth . . . . Predatory lending is a serious problem that needs to be addressed in a way that preserves incentives for responsible subprime lenders so that worthy borrowers with imperfect credit can become homeowners.

Id. at 7.

185 *Id.*

adjustable-rate mortgages, increase the risks of making payments over the long term.[186] According to former Federal Reserve Chairman Alan Greenspan, these novel mortgages, "expose borrowers to more interest-rate and house-price risk than the standard thirty-year, fixed-rate mortgage and . . . enable marginally qualified, highly leveraged borrowers to purchase homes at inflated prices."[187] As a result, if the housing market cools, "these borrowers, and the institutions that service them, could be exposed to significant losses."[188] A cooling market could result in foreclosure or even bankruptcy if homeowners are unable to sell or rent their property when they need to move to another location upon a PCS.[189]

B. Market and Specific Property Analysis

In order to minimize risk, servicemembers should consider purchasing a home that they can either rent, based on an acceptable cash flow, or sell, based on a suitable valuation. If buyers know servicemembers have to sell their property (e.g., the servicemember is moving, cannot afford two mortgages, and cannot rent for an amount sufficient to pay expenses), servicemembers have little bargaining power and are more likely to sell for considerably less than the property's market value.

1. The Importance of Being Able to Sell the Property

a. Location

In order to maximize the ability to sell or rent their home, servicemembers need to ensure they select the right property in the right location for the right price. Probably the most common phrase in real estate, "location, location, location,"[190] captures the significant factors that make a home valuable, including the quality and access to the corresponding schools, employment opportunities, and mass transportation systems, as well as the absence of excessive traffic, crime, and hazards.[191] In other words, "the same exact home built in one area will have a different value if built somewhere else."[192] For example, a prospective buyer may seriously consider purchasing a specific property until the buyer discovers that the home is located in a 100-year flood plain.[193] The seller may perceive the flood plain as a minor issue since there is only a "1 percent chance of

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186 Greenspan, *supra* note 112. An interest-only mortgage is defined as: "A balloon-payment mortgage on which the borrower must at first make only interest payments, but must make a lump-sum payment of the full principal at maturity." BLACK'S LAW DICTIONARY, *supra* note 14, at 1028. An amortization schedule is defined as: "A schedule of periodic payments of interest and principle owed on a debt obligation; specifically, a loan schedule showing both the amount of principal and interest that is due at regular intervals over the loan term and the remaining unpaid principal balance after each scheduled payment is made." BLACK'S LAW DICTIONARY, *supra* note 14, at 83. Therefore, a forty-year amortization schedule would allow the borrower to pay off the mortgage in forty years. An option adjustable rate mortgage is:

> [A]real killer. It gives homeowners the choice each month of paying the principal and interest, just the interest or an even-smaller minimum amount. Every month you pay the minimum, you're deeper and deeper in the red. And up to 80% of option-ARM buyers pay only the minimum, according to Fitch Ratings. Because the minimum payment doesn't cover the monthly interest, the deferred interest is added to the loan balance. After the loan balance grows to a certain point, the lender will demand that you start paying the full principal and interest -- on your now-bigger loan.

Marilyn Lewis, *Ouch! Your House Payment Just Doubled*, http://articles.moneycentral.msn.com/Banking/HomeFinancing/OuchYourHousePaymentJust Doubled.aspx (last visited Feb. 16, 2007). *See generally supra* note 151 and accompanying text (discussing ARMs).

187 Greenspan, *supra* note 112.

188 *Id.* Europe's largest bank HSBC announced that bad home loans to high-risk borrowers in the U.S. would be $10.5 billion, 20% more than antipicated. *See* Elizabeth Strott, *Housing Woes Slam Big Bank*, MSN MONEY, http://articles.moneycentral.msn.com/Investing/Dispatch/HousingWoesSlamBigBank.aspx (last visited Feb. 9, 2007).

189 *See* Liz Pulliam Weston, *Borrowers Gamble With Adjustable-Rate Mortgages*, MSM MONEY, http://moneycentral.msn.ontent/Banking/ P49733.asp?Printer (last visited Aug. 25, 2006). "There are already plenty of signs that consumers are overdosing on debts. Bankruptcies, foreclosures and delinquencies are at or near records -- despite low interest rates and soaring home values." *Id.* "Frank Nothaft, chief economist at Freddie Mac, which provides mortgage capital to the nation's lenders, estimates that adjustables comprise 15% to 20% of the $6.64 trillion in outstanding single-family mortgage debt." *Id.*

190 TRYBULA & HEWITT, *supra* note 10, at 163.

191 *See* NISSENBAUM, *supra* note 4, at 338.

192 TRYBULA & HEWITT, *supra* note 10, at 163.

193 *See generally* Jo Ann Howard, Federal Insurance Administrator, Speech at the US/Canada Consultative Group Meeting (Aug. 30-31, 2000) (transcript available at http://www.fema.gov/nfip/jahsp12.shtm). In light of Hurricane Katrina, potential homebuyers need to scrutinize location more than ever. Attempting to minimize financial risk, insurance companies like State Farm may stop issuing new homeowner policies in risk prone areas. *See* Associated Press, *State Farm: No New Home Policies in Miss*, http://www.msnbc.msn.com/id/17150886/ (last visited Feb. 17, 2007).

having a flood in a century," however, the buyer may view the flood plain as a major issue because there is approximately a 30% chance of having a flood "over the course of a 30-year mortgage."[194]

Servicemembers need to understand that location is not a purely financial valuation or convenience consideration but also a legal issue involving the attachment of personal jurisdiction.[195] Two ways a court may establish personal jurisdiction over servicemembers include servicemembers choosing a state as a domicile or consenting to a court's jurisdiction.[196] A third way a court may establish personal jurisdiction over servicemembers includes servicemembers purchasing real property in a state.[197]

Personal jurisdiction can become a significant issue for servicemember homeowners in divorce proceedings and situations involving tort liability (i.e., someone is injured on the servicemember's property). In the case of divorce, a state court may issue a divorce decree without dividing property in order to protect the due process rights of a defendant.[198] A subsequent court with appropriate jurisdiction may then divide the property unless the court entering the divorce decree had jurisdiction to divide the property but failed to do so.[199] This scenario is extremely important for servicemembers who PCS from state to state and who may acquire marital properties in different states. If servicemembers file for divorce after separating from their spouses and relocating to different states, servicemembers may have to file an action for property division in the state where the property is located or the state where their spouses are domiciled.[200] Furthermore, by purchasing a home with separate assets in states that divide property on an "equitable" basis, servicemembers risk losing their separate property in the event of divorce.[201] As a result, servicemembers contemplating divorce as a strong possibility may want to rent rather than buy and later cope with the jurisdiction and property division complications of home ownership.

b. Valuation

Just as important as finding the right location for a home is paying the right purchase price based on the "real" value of the home. One of the traditional methods of calculating valuation is an appraisal based on a market sales analysis, comparing the prices of similar properties that recently have sold in the same neighborhood.[202] The major problem with this method of valuation is that appraisals may be inflated or deflated based on whether the market is experiencing a real estate boom or bust. For example, in 2005, a study conducted by Global Insight and National City indicated that "65 metro areas representing 38 percent of the total U.S. housing market . . . [were] extremely overvalued and face[d] a high risk of future price correction."[203] This overvaluation was accompanied by national signs of a slowdown in the real estate market such as rising inventories and increasing sell times that indicated that the market was heading for a plateau.[204] As Federal Reserve Chairman Ben S. Bernanke warned:

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194 *Insuring Against Natural Disasters*, USAA MAG., Spring 2006, at 38; *see* Insurance Information Institute, *Catastrophes: Insurance Issues*, Feb. 2006, http://www.iii.org/media/hottopics/insurance/xxx.

195 *See, e.g.*, VA CODE ANN. §§ 8.01-328.1 (2006) (giving the state of Virginia personal jurisdiction over a person who acts directly or by an agent, as to a cause of action arising from the person's interest in, use, or possession of real property in the state of Virginia).

196 *See, e.g.*, Williams v. North Carolina, 325 U.S. 226 (1945) (discussing domicile); *In re* Marriage of Berry, 155 S.W.3d 838 (Mo. Ct. App. 2005) (discussing domicile and consent).

197 *See* BLACK'S LAW DICTIONARY, *supra* note 14, at 857. Quasi In Rem Jurisdiction is defined as "Jurisdiction over a person but based on that person's interest in property located within the court's territory." *Id.*

198 *See, e.g.*, In re *Marriage of Berry*, 155 S.W.3d at 838 (refusing to divide marital property as a result of due process concerns since the respondent was not a domiciliary of the state and lacked minimum contacts to the state); Vanderbilt v. Vanderbilt, 354 U.S. 416 (1957); Estin v. Estin, 334 U.S. 541 (1948) (establishing the divisible divorce doctrine and holding that a court decree was effective only in changing the marital status of the parties because the court lacked personal jurisdiction over the defendant).

199 *E.g.*, O'Connell v. Corcoran, 802 N.E.2d 1071 (2003) (holding that res judicata barred actions for property division at a future date if the court entering the original decree had jurisdiction to divide the property but failed to do so). *But see* Bottigii v. Wall, 765 N.E.2d 819 (Mass. App. Ct. 2002) (holding that res judicata only applies when property division was actually litigated).

200 In re *Marriage of Berry*, 155 S.W.3d at 838.

201 *See* CUNNINGHAM, *supra* note 22, at 243.

202 *See* SHEETS, *supra* note 7, at 9-10.

203 GLOBAL INSIGHT AND NATIONAL CITY, HOUSE PRICES IN AMERICA VALUATION METHODOLOGY & FINDINGS (DEC. 2005) http://www.globalinsight.com/publicDownload/genericContent/3Q2005report.pdf. *But see* Jim Jubak, *Why There is No Housing Bubble, The Sky is Not Falling*, MSN MONEY, June 10, 2005, http://moneycentral.msn.com/content/ P116257.asp?Printer.

204 *See* Les Christie, *Outlook Sours For Real Estate, Many Indicators Point to a Major Slowdown in Home Prices*, CNNMONEY.COM, Nov. 15, 2005, http://money.cnn.com/2005/11/14/real_estate/buying_selling/prices_going_south/index.htm; National Association of Realtors, *Pending Home Sales Index*

> [One] sector that is showing signs of softening is the residential housing market. Both new and existing home sales have dropped back, on net, from their peaks of last summer and early fall . . . [and] the reading for March points to a slowing in the pace of homebuilding as well. House prices, which have increased rapidly during the past several years, appear to be in the process of decelerating . . . . At this point, the available data on the housing market . . . suggest that this sector will most likely experience a gradual cooling rather than a sharp slowdown. However, significant uncertainty attends the outlook for housing, and the risk exists that a slowdown more pronounced than we currently expect could prove a drag on growth this year and next.[205]

In short, Chairman Bernanke forecasted the end of the 2000 to 2005 housing boom. However, only history will be able to tell the magnitude or existence of possible market bubbles.

Of course, if there is a housing bubble and the bubble pops, losses could be significant. For instance, from 1990 to 1996, the average house price in Los Angeles dropped 20.7%, or 34% after accounting for inflation.[206] Similarly, in Oklahoma City prices dropped 26% from 1983 to 1988 and took approximately fifteen years to recover.[207] This phenomenon has not only been experienced in the United States. Specifically, Japan experienced "rapidly increasing equity and real estate prices during the 1980s" followed by a "bursting of the bubble" in the 1990s causing real estate prices to plummet and the economy to suffer "a decade of relative stagnation marked by three arguably related recessions."[208]

Looking at real estate history and comparing it to today's environment of additional risks, servicemembers should be concerned. For example, many ARMs and interest only loans will be adjusting within the next few years and a lot of homeowners who overextended their finances to get into the housing market may experience foreclosures.[209] A large number of foreclosures could significantly affect the market.[210] Furthermore, making the situation even more risky, the National Association of Realtors estimates that home "prices, particularly in high costs areas, could decline 15 percent" if recent tax proposals get implemented.[211] Despite these factors, it is difficult to determine the actual risk. As former Federal Reserve Vice Chairman Roger W. Ferguson, Jr. states, detecting a bubble is "arguably impossible in real time" and, as a result, "preparation for a potential problem seems to be the best course of action."[212] For lending institutions it means that "good risk management . . . and the pursuit of fiscal prudence and price stability during booms, may ultimately serve as the best

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Slowing, Jan. 5, 2006, *available at* http://www.realtor.org/PublicAffairsWeb.nsf/Pages/PHSI0106?OpenDocument. One way to measure the strength of the market is to evaluate the average time it takes to sell properties in a certain area. In strong markets, properties will not stay on the market long before buyers purchase them. In weak markets, properties will stay on the market longer and inventories will increase. Increasing inventories could result in a market correction. According to Economist Dean Baker of the Center for Economic Policy and Research: "a rising inventory of homes in the Washington region could fuel a double-digit price decline if interest rates climb higher. Condo prices could fall by as much as 30 percent, and prices of single-family homes could drop by as much as 15 percent." Tomoeh Murakami Tse, *Housing Cool-Down is 'Orderly,' Fed Chief Says*, WASH. POST, May 19, 2006, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2006/05/18/AR2006051802196_pf.html.

205 Ben S. Bernanke, Chairman, Fed. Reserve Bd., Speech at the Joint Economic Committee, U.S. Congress: Outlook for the U.S. Economy (Apr. 27, 2006) (transcript available at http://www.federalreserve.gov/ boarddocs/speeches/2006/20060427/default.htm).

206 Les Christie, *Real Estate: When Booms Go Bust … Home Prices Can and Do Go Down. Here's What Declines Have Looked Like in the Past*, CNNMONEY.COM, Sept. 29, 2005, http://money.cnn.com/2005/09/19/real_estate/buying_selling/price_declines/index.htm.

207 *Id.*

208 Roger W. Ferguson, Jr., Vice Chairman, Fed. Reserve Bd., Speech at the Real Estate Roundtable, Washington, D.C.: Recessions and Recoveries Associated with Asset-Price Movements: What Do We Know? (Jan. 27, 2005) (transcript available at http://www.federalreserve.gov/ boarddocs/speeches/2005/2005112/default.htm).

209 *See* Kirstin Downey & Sandra Fleishman, *Housing Market Cooling, Data Say, In Washington, Sales Are Down, Inventory is Up*, WASH. POST, Nov. 11, 2005, *available at* www.washingtonpost.com/wp-dyn/content/article/2005/11/10/ AR2005111022241.html?sub=new. "The number of home in the United States forclosed by lenders rose 42 percent in 2006 from a year earlier in a sign that many homeowners have become overextended in mortgage debt . . . . More than 1.2 million foreclosure filings were reported nationwide during 2006, which is a rate of one foreclosure for every 92 households, according to RealtyTrac.Inc." Reuters, *Foreclosures Surge 42 Percent in 2006,* CNNMONEY.COM, Jan. 25, 2007, http://money.cnn.com/2007/01/25/real_estate/bc.usa. economy.housing.foreclosures.reut/index.htm?postversion=2007012508.

210 *See* Olson, *supra* note 1. "As we all know, foreclosures do not affect just the borrower who loses his home; they affect the entire community. Multiple foreclosures in one neighborhood will bring down the property value for all homeowners in the neighborhood." *Id.*

211 National Association of Realtors, *Change to Mortgage Interest Deduction Could Drop Home Prices by 15%, NAR President Warns*, Oct. 28, 2005, http://www.realtor.org/PublicAffairsWeb.nsf/Pages/ChangetoMIDCouldDropHomePrices?OpenDocument (discussing possible ramifications of tax proposals). *See* discussion *supra* p. 5.

212 Ferguson, *supra* note 208.

insurance for dealing with the inevitable occasional asset-price breaks observed in our modern economy."[213] This advice is just as useful to the average servicemember making the home buying analysis.

Regardless of a possible bubble, servicemembers who can keep their properties for longer durations should be able to deal with asset-price breaks and, as a result, benefit from appreciation and capital gain tax advantages. Fortunately, servicemembers and other homeowners who move frequently can take advantage of exceptions to the rule requiring homeowners to own (i.e., ownership test) and live (i.e., use test) in their principal residence for at least two of the last five years in order to exclude $250,000 ($500,000 for joint returns) of capital gain.[214] For example, servicemembers may suspend the five-year period for up to ten years of qualified extended duty.[215] In addition, servicemembers may take advantage of prorated capital gain exclusions if they fail to qualify for the ownership and use tests due to a change in place of employment or certain other unforeseen circumstances.[216]

To take advantage of these capital gain exclusions, however, servicemembers will normally have to own their principal residences for longer periods of time to allow their homes to appreciate. One way to increase the ability to hold onto a property is to ensure that the property can be successfully rented after considering rental income and expenses. In short, when purchasing a property, it is important for servicemembers to evaluate possible rental income[217] in addition to the ratio of home price to household incomes.[218]

2. The Importance of Being Able to Rent the Property (Cash Flow)

One of the most important financial aspects of a homeowner's decision to make their home available for rent is the homeowner's ability to maintain a positive or break-even cash flow after paying applicable expenses, such as principal, interest, taxes, maintenance, and management fees.[219] Purchasing a home based on its fundamental value as a potential income property is vital to this process. In general, the

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[213] *Id.*

[214] *See* I.R.C. § 121(a) (LEXIS 2006).

> To claim the exclusion, you must meet the ownership and use tests. This means that during the 5-year period ending on the date of the sale, you must have: Owned the home for at least 2 years (the ownership test), and [l]ived in the home as your main home for at least 2 years (the use test).

INTERNAL REVENUE SERV., DEP'T OF TREASURY, PUB. 523 SELLING YOUR HOME 9 (2005) [hereinafter PUB. 523].

[215] *See* I.R.C. § 121(d)(9). "The term 'Qualified official extended duty' means any extended duty while serving at a duty station which is at least 50 miles from such property or while residing under Government orders in Government quarters." *Id.* § 121(d)(9)(i). "The term 'extended duty' means any period of active duty pursuant to a call or order to such duty for a period in excess of 90 days or for an indefinite period." *Id.* § 121(d)(9)(iv). The following example shows how the five-year period can be extended by ten years:

> Mary bought a home on April 1, 1989. She used it as her main home until September 1, 1992, when she went on qualified official extended duty with the Navy. She did not live in the house again before selling it on August 1, 2005. Mary elects to use the entire 10-year suspension period. Therefore, the suspension period would extend back from August 1, 2005, to August 1, 1995, and the 5-year test period would extend back to August 1, 1990. During that period, Mary owned the house all 5 years and lived in it as her main home from August 1, 1990, until September 1, 1992, a period of 25 months. She meets the ownership and use tests because she owned and lived in the home for 2 years during this test period.

PUB. 523, *supra* note 214 at 13. "Together, the 10-year suspension period and the 5-year test period can be as long as, but no more, than 15 years. You cannot suspend the 5-year period for more than one property at a time." *Id.* at 13.

[216] *See* I.R.C. § 121(c)(2); PUB. 523, *supra* note 214, at 12-15. To determine the reduced maximum exclusion, servicemembers should fill out Worksheet 3 of *I.R.S. Publication 523*. *See* PUB. 523, *supra* note 214 at 15.

[217] *See* CARLETON H. SHEETS, REAL ESTATE MASTERY COURSE, A GRADUATE COURSE IN CREATIVE REAL ESTATE INVESTING 13-2 (1997); *see also* SHEETS, *supra* note 7, at 9-11.

[218] *See* GLOBAL INSIGHT & NATIONAL CITY, HOUSE PRICES IN AMERICA VALUATION METHODOLOGY & FINDINGS, UPDATED FOR THE 3RD QUARTER OF 2005 (2005), *available at* http://www.nationalcity.com/content/corporate/economicinsight/documents/3q2005report.pdf#search='HOUSE%20PRICES%20IN%20AMERICA%20VALUATION%20METHODOLOGY%20%26%20FINDINGs'.

[219] *See* TRYBULA & HEWITT, *supra* note 10, at 289. It is important for potential homeowners to understand the following:

> It does you no good for a property to appreciate significantly over a twenty-year period if you couldn't hold on to it because of cash flow problems. The biggest mistake most new real estate investors make is underestimating the costs associated with real estate management. . . . It is essential to set aside a maintenance reserve of maybe 5 to 10 percent of gross rents to cover . . . "unexpected" costs. Don't forget that your rental will never be occupied 100 percent of the time and set aside an allowance for this also.

Id.

> fundamental price of an asset typically is defined in terms of the discounted present value of the income stream . . . that the asset is expected to provide over time . . . . [F]or real estate, it is the discounted value of the rents or services that are expected to accrue to the owner over time.[220]

Servicemembers should attempt to purchase homes based on their fundamental value so that they have the option to lease the homes to tenants for an amount that will cover expenses. In general, this rental amount is one percent per month or more of the home's purchase price.[221] For example, if servicemembers are considering purchasing a property for $100,000, they should determine whether or not the property could be leased to tenants for $1000 per month. If servicemembers can lease the property to tenants for only $500 per month based on market rental rates, servicemembers may determine that the listed price of the property is too high. Nevertheless, servicemembers may still purchase a property at a possibly inflated price if they need to move into a nice home quickly and few alternative options exist. In addition, they may hope that the property will appreciate significantly over time and make the investment worthwhile. Furthermore, they may need a tax shelter or have plans to increase cash flow.

a. Increasing Cash Flow

If a one percent monthly rent is not possible upon the purchase of a home, servicemembers may be able to increase cash flow. Some common ways to increase cash flow include renting on a bi-weekly basis,[222] eliminating property management fees, renovating the property,[223] adding low cost amenities, furnishing the property, lowering real estate taxes, and transferring utility costs to tenants.[224] It is not necessarily easy, however, to increase cash flow. For example, servicemembers attempting to increase cash flow by eliminating property management fees may be taking significant risks. Since servicemembers deploy and are often stationed far from their property, eliminating property management fees may be dangerous, especially if servicemembers do not have personal experience managing properties.[225] As a result, servicemembers need to plan for deployment and identify a capable property manager that can take over these responsibilities at a moments notice.[226]

Another way servicemembers can increase cash flow is to take advantage of tax law. By renting their property, servicemembers can generally deduct all rental expenses[227] and depreciate the property's basis and improvement costs.[228] As an additional benefit, servicemembers can deduct a loss upon sale of their rental properties.[229] Furthermore, servicemembers

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[220] Ferguson, *supra* note 208.

[221] CARLTON H. SHEETS, THE PAINLESS GUIDE TO PROFITABLE PROPERTY MANAGEMENT 1-6 (1997) [hereinafter PROPERTY MANAGEMENT].

[222] SHEETS, *supra* note 7, at 21-5. By renting on a bi-weekly rather than a monthly basis, a landlord can get thirteen months of income from a twelve month lease. *Id* . "Owners of properties do this [i.e., rent on a weekly or bi-weekly basis] not only to accommodate tenants who can only afford to pay rent on a weekly basis, but also because they know that they [i.e., property owners] are going to get an additional four weeks rental income a year." *Id.*

[223] PROPERTY MANAGEMENT, *supra* note 221, at 2-3. Low cost renovations could include painting, replacing old carpet, installing new bathroom and kitchen fixtures, and adding better lighting. *Id.* More complex renovations might include conversion of a single family property into a duplex, assuming zoning and code requirements are met.

[224] *See id.* at 10-2 to -4.

[225] *See* SHEETS, *supra* note 7, at 21-3. At least at the beginning, servicemembers should manage their own property to learn the management business and be able to better manage property managers. *Id.* at 21-3 to -4.

[226] When this author was deployed to Afghanistan in 2004 as the Chief of Client Services, CJTF-76, this author saw servicemembers hand over property management responsibilities to spouses. Unfortunately, some spouses did not have the appropriate experience and mismanaged the properties, which, in some cases, resulted in foreclosure and bankruptcy.

[227] *See* INTERNAL REVENUE SERV., DEP'T OF TREASURY, PUB. 527, RESIDENTIAL RENTAL PROPERTY 3, 8 (2005) [hereinafter PUB. 527]. "You can deduct the cost of repairs to your rental property. You cannot deduct the cost of improvements. You recover the cost of improvements by taking depreciation . . . ." *Id.* at 3. Examples of expenses include repairs, advertising, cleaning, maintenance, utilities, insurance, taxes, interest, points charged solely for the use of money, commissions, tax return preparation fees, travel expenses, rental payments, and local transportation expenses. *Id.* at 3-4. Examples of improvements include bedroom additions, kitchen and bath modernizations, heating and air conditioning system installations, roof installations, and other work that adds "to either the value or the life of the property." *Id.* at 3.

[228] *See id.* at 8, 10. In general, for a taxpayer to depreciate property, the taxpayer must own the property and use the property in a business or income-producing activity, and the property must have a determinable useful life greater than one year. *Id.* at 8. Unfortunately, you cannot depreciate land "because land does not wear out, become obsolete, or get used up." *Id.* at 9.

[229] *See* I.R.C. § 165(c) (LEXIS 2006).

selling homes after 1997 and satisfying the objective ownership and use tests[230] may still be able to exclude considerable capital gain upon sale.[231]

b. Accounting for Depreciation

In their efforts to increase cash flow, servicemembers need to ensure they account for depreciation. Specifically, if they decide to sell the property in the future, they "cannot exclude the part of the gain equal to the depreciation . . . claimed or [that] could have [been] claimed for renting the house."[232] For example:

> Dan sold his main home in 2005 at a $10,000 gain. He meets the ownership and use tests to exclude the gain from his income. However, he used one room of the home for business [or as a rental unit] in 2004 and has records showing he claimed [or could have but failed to claim] $1,000 depreciation. He can exclude $9,000 ($10,000 - $9,000) of his gain. He has a taxable gain of $1,000.[233]

Servicemembers must account for depreciation whether or not they actually claimed depreciation. Fortunately, however, servicemembers *may* treat their homes as principal residences if they rent their homes and their homes appreciate in value, and they may treat their homes as rental properties if they rent their homes and their homes lose value.[234] Having both options, servicemembers may take advantage of tax law when managing their financial assets.

C. Maximizing Financial Options

Servicemembers need to understand their personal situation, the market, and the value of specific properties to maximize their current and future financial options. By buying a home before establishing themselves financially, servicemembers may end up feeling that their home mortgages own them rather than the other way around. Similarly, by paying too much for a home, servicemembers may be constrained from selling or renting their properties. As a result, servicemembers wanting to buy homes should select properties that "make economic sense"[235] so that they have the option to sell or rent their properties in the future. Of course, servicemembers may find it challenging to keep all these options available in light of the numerous legal and financial issues involved in making a housing decision.

IV. Step Three: Making the Decision to Purchase, Rent, or Live in Military or Privatized Military Housing; A Quantitative Starting Point

Servicemembers can easily become overwhelmed with the numerous legal and financial considerations in determining whether to purchase, rent, or live in military or privatized housing. To help start the analysis, servicemembers should begin by making a quantitative comparison concerning the measurable costs associated with each alternative. Specifically,

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230 *See* Pub. L. No. 105-34,111 Stat. 788 (1997). *See generally* Lieutenant Colonel Noël Woodward, *Important News for Servicemembers Who Sold Homes after 6 May 1997 and Paid Income Tax on Gains from Those Sales*, ARMY LAW., Oct. 2004, at 8 (discussing tax law changes due to the Tax Relief Act of 1997 and the Military Family Tax Relief Act of 2003). *See supra* note 214 (discussing the objective ownership and use tests); *see infra* note 234 (discussing the subjective intent test for sales prior to 1997).

231 *See* I.R.C. § 121.

232 PUB. 523, *supra* note 214, at 17. "If you were entitled to take depreciation deductions because you used your home for business purposes or as rental property, you cannot exclude the part of the gain equal to any depreciation allowed or allowable as a deduction for periods after May 6, 1997." *Id.* "Lease of real property for definite duration is depreciable; therefore, it is 'section 1250 property' and is subject to depreciation recapture when disposed of." Rev. Rul. 72-85 (1972) 1972-1 CB 234; 26 U.S.C.S. § 1250 cmt. n.2 (LEXIS 2006).

233 *Id.*

234 *See* I.R.C. § 121 (discussing gains); *id.* § 165(c) (discussing losses). However, if their homes are not rented out and treated as rental properties, taxpayers cannot deduct the loss upon sale of their homes. *See* PUB. 523, *supra* note 214, at 4; *see also* 26 C.F.R. §§ 1.165-9 (LEXIS 2006) (discussing losses). In addition, if their homes are not rented for profit, taxpayers can deduct rental expenses only up to the amount of the rental income. *See* PUB. 527, *supra* note 227, at 5. The dual benefit of taking advantage of both gains and losses is a welcome change from the subjective test tax law governing the sale of homes occurring prior to 6 May 1997. *See generally* Major Thomas Keith Emswiler, *The Tax Consequences of Renting and Then Selling a Residence*, ARMY LAW., Oct. 1995, at 20 (discussing the subjective test for sales prior to 1997 concerning the taxpayer's intent to convert his home into a rental property as part of a "profit-oriented enterprise"). Factors the courts looked to in making this subjective determination included: "(1) the length of time the house was occupied by the individual as his residence . . .; (2) whether the individual permanently abandoned all further personal use of the house; (3) the character of the property (recreational or otherwise); (4) offers to rent; and (5) offers to sell." Grant v. Comm'r, 84 T.C. 809 (1985).

235 PROPERTY MANAGEMENT, *supra* note 221, at 2-1.

servicemembers should consider tax benefits, equity growth, foregone interest, and maintenance. In addition, if servicemembers plan to live in the property initially and then rent the property to tenants, they should consider depreciation, management fees, and vacancy. Servicemembers will obviously prioritize different factors based on their individual circumstances and tastes. The following sections run through examples demonstrating a process for making these quantitative comparisons. These examples are summarized in the tables in Appendices A, B, C, and D.

A. To Rent vs. Buy a Home (Appendices A and B)

To begin their analysis, servicemembers should identify the quantifiable expenses and benefits associated with each housing alternative. Next, servicemembers should calculate the tax savings of purchasing a home and itemizing deductions and compare these figures to renting a similar residence and taking the standard deduction. Finally, servicemembers should total their expenses, tax savings, and avoided costs of renting a similar property. To make a comparison to military or privatized housing, servicemembers should substitute their BAH allowance for their avoided rental costs and factor in other costs such as free utilities and renters insurance.

For example, Appendix A shows a hypothetical couple filing a joint tax return, making $59,400 annually, and deciding whether to purchase a $300,000 home or rent an equivalent residence. In making this determination, the couple anticipates using savings from a 4% interest bearing account to make a 20% down payment of $60,000 and cover closing costs of $10,000. The couple plans on making this down payment to avoid PMI, reduce their monthly mortgage payment, and provide an equity cushion from possible declines in market value.

After identifying the expenses and benefits associated with each housing option, the couple should determine their tax savings between buying and renting a home. By itemizing their deductions of mortgage interest, real estate taxes, and other tax-deductible expenses, the couple in Appendix A reduces their net taxable income from $59,400 to $35,900. Although they forego their $10,000 standard deduction, by purchasing the home and itemizing their deductions they end up saving $2445 in taxes when compared to renting a similar property. Next, the couple totals their expenses, foregone interest, tax savings, and rental costs avoided to determine whether it is cheaper to buy or rent on an annual basis. In this example, the couple experiences a net benefit of $1745 annually by purchasing a home.

These tax benefits increase based on the couple's income. Appendix B shows the same example except the couple has a higher annual income. Instead of being in the 15% tax bracket, the couple in Appendix B is in the 25% tax bracket. This example demonstrates that because of the progressive tax system, purchasing a home can be more beneficial if there is more taxable income to shelter. Although the examples in Appendices A and B are the same except for annual income, the couple in Appendix B experiences a tax savings of $4075 and a net home ownership benefit of $3375.

Servicemembers must also keep in mind the Alternative Minimum Tax (AMT), which attempts to ensure that persons earning above a certain amount and benefiting from certain tax advantages pay at least a minimum amount of tax.[236] To determine whether the AMT applies, taxpayers should complete IRS form 6251.[237] Fortunately, the President's Advisory Panel on Federal Tax Reform has recommended eliminating the AMT.[238] Until the AMT is officially repealed, however, it will cover more and more middle-class taxpayers each year.[239]

Although these examples are rather simplistic, they can be modified based on a servicemember's specific circumstances. For example, a servicemember can factor in quantifiable costs or benefits, such as utilities and transportation costs, for a better-tailored analysis. Similarly, transaction costs for selling the property, appreciation, and capital gain could be estimated for the period of home ownership and broken down into yearly amounts, which also could be factored into the analysis. Unfortunately, statistics cannot adequately measure the numerous intangible costs and benefits such as having the autonomy to decorate or improve one's home. As a result, this type of quantitative analysis must serve as only a starting point in an effective analysis.

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[236] *See* Internal Revenue Serv., Topic 556 - Alternative Minimum Tax, http://www.irs.gov/taxtopics/tc556.html (last visited Aug. 28, 2006).

[237] INTERNAL REVENUE SERV., DEP'T OF TREASURY, 2005 INSTRUCTIONS FOR FORM 6251 (REV. JAN. 2006) ALTERNATIVE MINIMUM TAX FOR INDIVIDUALS (2006).

[238] FEDERAL TAX REFORM, *supra* note 34, at 85.

[239] *Id.* In 2006, the AMT is estimated to apply to 21.6 million taxpayers. *Id.* at 86. By 2015, the AMT is estimated to apply to 52 million taxpayers. *Id.*

B. Cash Flow as an Income Property (Appendix C)

Although this rent vs. buy analysis is useful in comparing the quantifiable costs between purchasing, renting, or living in military or privatized military housing, it is practical only if servicemembers remain in the same residence. The analysis is not effective if servicemembers move to another duty station and want to keep their home at their departing station. As a result, before purchasing a property, servicemembers should consider whether the property could be rented with a positive or break-even cash flow. If servicemembers cannot achieve a break-even or positive cash flow, servicemembers may not experience sufficient equity growth and appreciation to cover the transaction costs upon the eventual sale of the property.

For example, Appendix C shows a hypothetical real estate investor considering the purchase of a rental property. First, he calculates his expected rental gross income allowing for vacancy. Second, he totals his expenses including principal, interest, taxes, management fees, maintenance, insurance, and other miscellaneous costs. Third, he offsets his rental gross income by his expenses to determine his cash flow. In this hypothetical case, the real estate investor can maintain an annual $564 positive cash flow, $3000 equity growth, and $436 paper loss. Over time, as the investor holds on to the property, however, the tax benefits will decrease and the investor will have to find a new tax shelter to cover his income from his rental property.

C. The Decision Matrix (Appendix D)

With so much focus on costs and cash flow, servicemembers may fail to see the big picture. To address this concern, servicemembers should consider using a decision matrix.[240] A decision matrix can assist servicemembers in making choices that involve "multiple, and often competing, decision criteria" where some factors may be more important than others.[241] Servicemembers can use a decision matrix as part of their analysis incorporating their cost comparison (e.g., Appendices A and B) and cash flow (e.g., Appendix C) results or as a totally separate analysis tool disregarding cost and cash flow. The U.S. Army has successfully used one such tool, the DECMAT Program for Windows Version 2.2, to train its students at the Combined Arms and Services Staff School and the U.S. Army Command and General Staff College.[242] Although the detailed instructions are included in Appendix E, the process can be summarized in five relatively simple steps.[243]

First, servicemembers should identify the significant factors bearing on their decision and determine the relative weights of these criteria based on their own personal preferences. Possible factors bearing on the servicemember's housing decision could include quality of residence, location, cost, and wait time to move in. Other factors could include the possibility of deployment, divorce, bankruptcy, or change in employment. For example, the Pairwise Comparison in Appendix D shows an example where a servicemember slightly favors "quality of residence" to "location," favors "quality of residence" to "cost" and "wait time," and strongly favors "quality of residence" to "duration of residence" and "investment." By specifying these priorities, the DECMAT program automatically assigns numerical weights to each criterion. In the example "quality of residence," "location," "cost," "wait time," "duration of residence," and "investment," received the following weights of 4.93, 3.09, 1.78, 1.78, 1, and 1 respectively.

Second, servicemembers should determine whether the criteria can be measured numerically or whether the possible courses of action can only be ranked against each other based on the criteria. For example, a criterion such as "cost" could be numerically measured in dollars, but a criterion such as "quality of residence" could not be measured easily with a raw numerical figure. However, servicemembers could effortlessly determine whether the "quality of privatized housing" should be ranked higher than the "quality of military housing" and rank the courses of action accordingly.

Third, servicemembers should select the appropriate type of decision matrix. A relative values matrix is probably more appropriate for most servicemembers because it is easy to use and does not require evaluation criteria to be expressed with specific numerical values such as dollars or miles per gallon.[244] Although a multiplication matrix is more accurate because it

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[240] *See* STIKKERS, *supra* note 2.

[241] CAPTAIN RICHARD B. STIKKERS, DECMAT 2.2 INSTRUCTIONS 1, Oct. 26, 1998 [hereinafter INSTRUCTIONS]. *See infra* Appendix E.

[242] *See id.* at 2.

[243] *See id.* at 1. It should be noted that the author simplified the specific DECMAT procedures.

[244] *Id.* at 4.

accounts for "the magnitude of difference among an evaluation criterion's raw data," it cannot be used if a single criterion such as "quality of residence" lacks a numerical measure of value.[245]

Fourth, assuming servicemembers select a relative values matrix, they should evaluate each course of action with respect to each criterion and rank each course of action accordingly. To rank courses of action, servicemembers must specify whether a lower rank or higher rank is better and consistently apply the ranking system throughout the decision matrix to properly determine the outcome.[246] For instance, in the hypothetical case in Appendix D regarding the "quality of residence" criterion, "buy," "privatized housing," "rent," and "military housing" are ranked 1, 2, 3, and 4 respectively, with 1, the lower rank, being better. In the event that two courses of action are equal, their rankings are averaged and assigned accordingly.[247] For example, in the "location" criterion from the same hypothetical case, "military housing" and "privatized housing" provide similar benefits. As a result, the example assigns them both the same value of 1.5 (i.e., (1+2) / 2 = 1.5).

Fifth, servicemembers should compute the values of each course of action to determine which housing alternative is best. If servicemembers apply a "higher rank is better analysis," the best course of action will have the highest score. Conversely, if servicemembers apply a "lower rank is better analysis," the best course of action will have the lowest score. For example, in Appendix D, "privatized housing" is the best housing alternative given the priorities of this hypothetical servicemember because it has the lowest score. To test this result, servicemembers can conduct a sensitivity analysis to determine whether the decision would be different if the priorities of the servicemembers changed.[248] For example, if servicemembers valued "investment" more (i.e., giving it a weight of 2.77 rather than 1), then "buy" would become the optimal decision.

Although the analysis may seem complex, the DECMAT program is relatively user-friendly and can be used quickly to evaluate different options given the different priorities of servicemembers.[249] As a result, servicemembers should consider using the DECMAT or similar tool to evaluate the numerous factors they deem important to their specific situation.

V. Conclusion

Servicemembers need to thoroughly analyze numerous legal and financial disciplines, from tax law and family law to valuation and cash flow, in order to minimize the risks associated with selecting housing options. Failure to consider the numerous disciplines and their consequences as a whole *in advance of selecting a housing option*, can result in events, such as not being able to terminate a lease prior to a deployment, unintentionally submitting oneself to the jurisdiction of a state court, and defaulting on a mortgage. Although owning a home may be one of the best ways to build wealth, buying a home can be disastrous if servicemembers pay too much for a home, buy a home in the wrong location, overextend their finances, or own their home for too short a period of time.

Servicemembers need to consider their housing options and take the necessary steps months to years in advance to ensure minimum risks and maximum rewards. Servicemembers should begin by immediately evaluating their credit, fixing any discrepancies, and taking steps to improve their credit scores to prepare themselves for buying a home or renting an apartment in the future. Simultaneously, servicemembers should strive to eliminate debt, build financial reserves, and increase access to credit. Taking these steps will facilitate buying a home when the timing based on individual circumstances is most advantageous.

Months prior to a PCS, servicemembers should consider taking permissive temporary duty to locate suitable housing alternatives. At that time, servicemembers can identify the housing and rental markets by talking to realtors, housing office representatives, and sponsors. Servicemembers can evaluate the flexibility of landlords to include military clauses as well as review the housing rules and wait times associated with military and privatized housing. Servicemembers can compare costs associated with each housing option and factor in typical issues such as tax benefits and property taxes as well as atypical concerns such as child support and divorce.

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245 *Id.*

246 *See id.* at 2.

247 *See* INSTRUCTIONS, *supra* note 241, at 3.

248 *See id.* at 8. "Sensitivity analysis identifies the degree to which the DECMAT results are subject to change with only small changes in the evaluation criteria weights. A solution which is not sensitive to changes in weights provides the decision-maker with confidence that he or she has a valid solution." *Id.*

249 *See* STIKKERS, *supra* note 2.

Servicemembers, especially those anticipating a deployment or PCS shortly after arriving at a new duty station, should also consider selling or renting their prospective home. By considering these issues prior to purchasing a home, servicemembers will be able to determine if they will be able to sell their homes without incurring significant deficiencies or rent their homes while maintaining a break-even or positive cash flow. For those interested in renting out their home but concerned about having negative cash flows, servicemembers can calculate renovation costs into the purchase decision in order to determine whether they could achieve a break-even or positive cash flow.

By considering the numerous legal and financial issues and evaluating them based on their individual circumstances, servicemembers can set themselves up for success regardless of the following: how long they plan to be physically located at a duty station, how strong their finances are at any point in time, or what housing option they ultimately select. In today's world of rising interest, divorce, foreclosure, bankruptcy, and deployment rates, servicemembers need to plan now more than ever to avoid potentially disastrous results in the current unforgiving legal and financial environment.

Appendix A

To Rent vs. Buy a Home (15% Tax Bracket in 2005)[250]

Step 1. Computing the Tax Deduction Benefit (Assuming Married Filing Joint Return).

	Rent ($)	Buy ($)
Taxable Income	**59,400**	**59,400**
Foregone Interest ($70,000 x .04)	2,800	
Standard Deduction	(10,000)	
Itemized Deductions		(2,000)
Interest Expense Deduction		(20,000)
Real Estate Taxes		(1,500)
Net Taxable Income	52,200	35,900
Taxable Income Reduction		16,300
x Marginal Tax Rate (2005)		x 15%
Tax Savings Due to Purchase		**2,445**

Step 2. Comparing Renting versus Buying in terms of Cash Flow and Equity Growth.

Homeowner (costs) or Benefits*	Buy
Interest Paid on Mortgage	(20,000)
Real Estate Taxes	(1,500)
Non Tax Deductible Fees such as Association Costs and Trash Fees	(500)
Home Owners vs. Renters Insurance Difference	(400)
Maintenance	(3,000)
Foregone Interest on Other Possible Investments	(2,800)
Tax Savings	**2,445**
Equity Growth due to Paying Down the Mortgage	3,500
Net Cost of Home Ownership	(22,255)
Rental Cost Avoided or BAH if on-post	+24,000
Net Benefit or (Cost) of Home Ownership	**1,745**

*This Analysis may include

Other Quantifiable Costs or Benefits
- Utilities (landlord may pay for some utilities)
- Transportation Costs (if there is a difference in commuting distance to work)
- Transaction Costs and Time Involved in Selling or Renting upon PCS
- Appreciation (or loss in value) of the Property

Other Intangible Costs or Benefits
- Pleasure of Owning and having a High Degree of Privacy
- Having Autonomy to Improve the Property
- Difference in the Size and Quality of the Residence

[250] *See* TRYBULA & HEWITT, *supra* note 10, at 182 (showing a similar example). The examples in this Appendix use the 2005 tax tables. The analysis does not change using a different year's tax tables, but the amounts themselves change. For example, in 2006, the standard deduction for married taxpayers filing jointly increased from $10,000 to $10,300. *See* INTERNAL REVENUE SERV., DEP'T OF TREASURY, PUB. 17 YOUR FEDERAL INCOME TAX 132 (2006).

Appendix B

To Rent vs. Buy a Home (25% Tax Bracket in 2005)[251]

Step 1. Computing the Tax Deduction Benefit (Assuming Married Filing Joint Return).

	Rent ($)	Buy ($)
Taxable Income	**100,000**	**100,000**
Foregone Interest ($70,000 x .04)	2,800	
Standard Deduction	(10,000)	
Itemized Deductions		(2,000)
Interest Expense Deduction		(20,000)
Real Estate Taxes		(1,500)
Net Taxable Income	92,800	76,500
Taxable Income Reduction		16,300
x Marginal Tax Rate (2005)		x 25%
Tax Savings Due to Purchase		**4,075**

Step 2. Comparing Renting versus Buying in terms of Cash Flow and Equity Growth.

Homeowner (costs) or Benefits*	Buy
Interest Paid on Mortgage	(20,000)
Real Estate Taxes	(1,500)
Non Tax Deductible Fees such as Association Costs and Trash Fees	(500)
Home Owners vs. Renters Insurance Difference	(400)
Maintenance	(3,000)
Foregone Interest on Other Possible Investments	(2,800)
Tax Savings	**4,075**
Equity Growth due to Paying Down the Mortgage	3,500
Net Cost of Home Ownership	(20,625)
Rental Cost Avoided or BAH if on-post	+24,000
Net Benefit or (Cost) of Home Ownership	**3,375**

*This Analysis may include

Other Quantifiable Costs or Benefits
- Utilities (landlord may pay for some utilities)
- Transportation Costs (if there is a difference in commuting distance to work)
- Transaction Costs and Time Involved in Selling or Renting upon PCS
- Appreciation (or loss in value) of the Property

Other Intangible Costs or Benefits
- Pleasure of Owning and having a High Degree of Privacy
- Having Autonomy to Improve the Property
- Difference in the Size and Quality of the Residence

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[251] *See id.* (showing a similar example).

Appendix C

Cash Flow as an Income Property[252]

Income	**Dollars**
Possible Annual Gross Income ($1,400 x 12 months)	16,800
Minus 5% Vacancy Allowance ($16,800 x .05)	(840)
Actual Gross Income	15,960
Expenses	
Mortgage Payment (principal of $3,000, interest, and taxes)	(12,500)
10% Management Fees ($15,960 x .10)	(1,596)
Maintenance/Repairs	(1,000)
Insurance	(200)
Miscellaneous such as advertising, accounting, and legal fees	(100)
Total Expenses	15,396
Cash Flow ($15,960 of income minus $15,396 of expenses)*	564

* In addition to this $564 cash flow (i.e., income minus expenses) are equity growth (i.e., principal payments reducing the mortgage balance) and tax incentives (i.e., interest deductions, real estate tax deductions, and depreciation deductions).

For example, in this hypothetical case, the landlord could experience $3,000 of equity growth, while having a tax deduction of $16,396 (i.e., expenses of $12,396 [$15,396 of expenses minus $3,000 of principal payments] plus depreciation of $4,000). As a result, the landlord has a property generating a positive cash flow, paying off the mortgage, and simultaneously creating a paper loss of $436 (e.g., $16,396 of deductions minus $15,960 of income = $436 loss) for legal tax sheltering purposes.

[252] *See* PROPERTY MANAGEMENT, *supra* note 221, at 2-1 (showing a similar example); *see also* SHEETS, *supra* note 7, at 9-12.

Appendix D

Decision Matrix[253]

Pairwise Comparison

	2	3	4	5	6
1	2	3	3	4	4
2		2	2	3	3
3			1	2	2
4				2	2
5					1

Enter the importance factor of each horizontal evaluation criteria compared to each vertical evaluation criteria

Print

Send Values

Cancel

Override

Help

Legend of Importance Factors
1 - Equal
2 - Slightly Favored
3 - Favored
4 - Strongly Favored

DECISION MATRIX — Housing Decision

Weight	4.93	3.09	1.78	1.78	1.00	1.00	Total
Criteria / COA	Quality of Residence	Location of Residence	Cost of Residence	Wait Time to Move In	Duration of Residence	Investment Opportunity	
Buy	1	3.5	4	2	4	1	31.419
Rent	3	3.5	3	1	3	3	38.721
Live in Military Housing	4	1.5	1	4	1.5	3	37.749
Privatized Housing	2	1.5	2	3	1.5	3	27.889

Relative Values Matrix
Less is better
Consistency Ratio = 99.33

Sensitivity Analysis

Quality of Residence: Not Sensitive
Location of Residence
Changes at 1.32, Optimal is Buy
Cost of Residence: Not Sensitive
Wait Time to Move In: Not Sensitive
Duration of Residence: Not Sensitive
Investment Opportunity
Changes at 2.77, Optimal is Buy

253 U.S. DEP'T OF ARMY, 52D ID & FORT RILEY MEMO. 25-50, 52D INFANTRY DIVISION (M) & FORT RILEY STAFF OFFICERS GUIDE (1 Feb. 20yy).

Appendix E

DECMAT 2.2 Instructions[254]

Table of Contents

1. Introduction.

a. The Decision Matrix (DECMAT) is a tool decision-makers can use to assist them in solving problems with multiple, and often competing, decision criteria. Some of these criteria may be more important than others. This DECMAT program provides a structured approach, first to establish criteria weights and then to apply these weights within the decision matrix. In this way, decision-makers have a relatively objective tool to use for their decisions.

b. This program was developed for use at the Combined Arms and Services Staff School (CAS3) at the U.S. Army Command and General Staff College, Ft. Leavenworth, Kansas. The program author is a 1997 graduate of CAS3. This program is considered freeware and is intended for dissemination throughout the U.S. Army.

2. Terms.

a. Objective: The desired end state or goal of the decision.

b. Evaluation Criteria (or States of Nature): Aspects of the situation over which the decision-maker has no control.

c. Courses of Action (or Strategies): Alternative choices available to the decision-maker.

d. Raw Data (Payoffs): The dependent variable. Results of the interaction between the criteria and the courses of action (i.e., the cost of a course of action given an evaluation criterion).

3. Program Start-Up Window.

a. Upon executing the DECMAT Program, one finds an empty, unlabeled 2x2 DECMAT in the program start-up window. This program has the capability to work up to a 10x15 matrix.

b. This program always calculates values based on lower values being better, both within the matrix and for the total column.

[254] INSTRUCTIONS, *supra* note 241.

4. Select Matrix Type and Matrix Set Up.

a. Select the matrix type by dragging down the Matrix menu and highlighting either the Multiplication Matrix or the Relative Value Matrix. An alternate method to select the matrix type is to select the circled M or R on the tool bar to select a Multiplication or Relative Value Matrix, respectively. The default selection is a "Multiplication Matrix."

b. Evaluation Criteria are shown along the top of the matrix. Click on the + or - button with the horizontal arrow (located on the tool bar) to add or delete Evaluation Criteria columns. Add the criteria names to title boxes at the top of the matrix; the title boxes accept two lines of entry. By convention, Evaluation Criteria are shown in order of weight, descending from left to right in the matrix. See Weighting of Criteria for further explanation.

c. Courses of Action are shown along the left side of the matrix. Click on the + or - button with the vertical arrow (located on the tool bar) to add or delete Courses of Action rows. Add the Courses of Action names to the boxes on the left side of the matrix; the Course of Action name boxes accept two lines of entry.

d. Add a matrix title to the box at the top of the matrix.

5. Relative Value Matrix.

a. This matrix type is the easier of the two methods to use; however, this method is also less accurate since it does not account for the magnitude of difference between raw data values.

b. To use the relative value matrix:

(1) For a given evaluation criterion, rank the courses of action based on the payoff raw data.

(2) Assign 1 to the best course of action for a given evaluation criterion and continue rank ordering the rest of the courses of action within that evaluation criterion.

(3) If two or more courses of action have the same raw data value within a given evaluation criterion, average their rankings and assign that average to each of these courses of action.

EXAMPLE:

Two courses of action are tied for the 2d and 3d ranking.

(2+3) / 2 = 2.5

Assign 2.5 to each course of action.

(4) Input the relative values to the DECMAT in the appropriate raw data box corresponding to that combination of Course of Action and Evaluation Criterion.

c. Computation: The relative value method computes the total for each Course of Action by adding the products of each evaluation criterions relative value times the evaluation criterions weight along a Course of Action row (see Weighting of Criteria), as follows:

(RV1)(W1) + (RV2)(W2) + . . . + (RVn)(Wn) = Total REL VAL

Where: RVn = Relative Value for the Raw Data of the nth Evaluation Criterion

Wn = Weight of the nth Evaluation Criterion

6. Multiplication Matrix:

a. This method is the more accurate of the two methods since it uses the actual raw data payoffs for each course of action in its computation. In this way, the multiplication method can account for the magnitude of difference among an evaluation criterion's raw data for the Courses of Action.

EXAMPLE: *In a case where the raw data for a criterions three courses of action is 3, 21, and 22, the method uses the values of 3, 21, and 22 to determine its solution rather than assigning the less precise relative values of 1, 2, and 3. Notice how the middle value would have an advantage in the relative value matrix by appearing to be closer in value to the best value than it actually is.*

b. To use the multiplication matrix:

(1) Input the raw data directly to the DECMAT in the appropriate raw data box corresponding to that combination of Course of Action and Evaluation Criterion.

(2) Min and Max Tabs. Below each Evaluation Criterion column is a tab for Min and Max. The default is that Min is selected. The matrix in the DECMAT program is designed to analyze on the basis that lower values are better. To properly use this matrix:

(a) For each Evaluation Criterion, determine whether the value for that Evaluation Criterion is better as a higher number or as a lower number.

(b) If the Evaluation Criterion is better as a lower value, leave Min selected below that Evaluation Criterion and analyze the next Evaluation Criterion.

(c) If the Evaluation Criterion is better as a higher value, select the Max tab appearing below that Evaluation Criterion. The program will automatically invert this value in the matrix during its computation so that the larger values are expressed numerically as smaller values. The final printout will show these values as inverted fractions.

EXAMPLE: *For an automobile purchase, you are considering Fuel Economy as an Evaluation Criterion, measured in miles per gallon (MPG). In this case, higher values are better. By selecting the Max tab below the Evaluation Criterion, you will have the program invert these values. The values of 15 MPG and 20 MPG become 1/15 MPG and 1/20 MPG, respectively, in the matrix as the program calculates the total. The final print out will show 1/15 and 1/20 for these values.*

(3) Computation. The multiplication method computes the total for each Course of Action by multiplying each evaluation criterion's raw data value taken to the exponential power of the evaluation criterion's weight (see Weighting of Criteria), as follows:

(RD1)(W1) . (RD2)(W2) . . . . . (RDn)(Wn) = Total MULTIPLICATION

Where: RDn = Raw Data of the nth Evaluation Criterion

Wn = Weight of the nth Evaluation Criterion as the exponent

(4) Limitations on the use of the Multiplication Matrix. One cannot use the multiplication method, and therefore must use the relative value method, if either of the following conditions exists:

(a) Evaluation Criterion which cannot be expressed with a numerical value. Do not assign relative values for use in a multiplication matrix, as this introduces inconsistencies derived from using a hybrid matrix.

(b) Raw Data with a zero value. Zero multiplied by anything will always equal zero for the total, no matter how large other criteria values may be. For this situation, one may redefine the evaluation criteria in a way that results in values other than zero. If this cannot be done, one must use the Relative Value Matrix. Do not simply add 1 (or any other value) to the raw data as this will introduce subjective inaccuracies to the matrix.

7. Weighting of Criteria:

a. Some criteria will often be more important than other criteria. This program uses the technique of Pairwise Comparison to lend objectivity to what otherwise would be a subjective ranking of many criteria simultaneously -- something the human mind has difficulty doing. In short, the program translates a verbal comparison of the relative importance of the Evaluation Criteria into numerical values and then uses a mathematical model to determine an appropriate weight that accurately reflects the logic.

b. To determine criteria weights using the Pairwise Comparison techniques:

(1) Step 1: Rank order the evaluation criteria in general importance as you see them at this point.

EXAMPLE:

1 Evaluation Criterion #1
2 Evaluation Criterion #2

: :
: :
n Evaluation Criterion #n

(2) Step 2: Pull down the Matrix menu and select Criteria Weights. The window for determining Pairwise Comparison will appear.

(3) Step 3: Review the factors for criteria comparison at the bottom right of the screen:

1 Equal
2 Slightly Favored
3 Favored
4 Strongly Favored

(4) Step 4: Input the numerical importance factor to the chart by comparing each of the Evaluation Criteria with each of the other criteria. The example below shows the process by which one can determine the pairwise comparison:

EXAMPLE:

- - *Which Evaluation Criterion is more important ... Evaluation Criterion #1 or Evaluation Criterion #2?*

Answer: Evaluation Criterion #1

- - *By what importance factor?*
Answer: 3 (Favored)

- - *Enter 3 in the box where Evaluation Criteria #1 along the left intersects Evaluation Criterion #2 along the top.*

- - *Continue to evaluate all pairs until the chart is complete.*

(5) Step 5: Conduct a logic check. All pairwise comparison importance factors should increase in value or be equal in value as you move from left to right along a row of the chart.

EXAMPLE:

	EC#2		EC#3		EC#4
EC#1	**3**	**--->**	**3**	**--->**	**4**
EC#2			**1**	**--->**	**3**
EC#3					**3**

If the values do not increase or remain the same as you move from left to right in the chart, one of two conditions exists:

(a) Evaluation Criteria are originally rank ordered out of sequence. To solve, change the rank order of the Evaluation Criteria and rework the Pairwise Comparison. Change the values of the columns in the DECMAT to show the Evaluation Criteria in the same order.

(b) The logic of the pairwise comparison is incorrect. To solve, review the pairwise comparison factors.

Conduct a similar check within a given Evaluation Criterion. The values should decrease or remain the same as you move from top to bottom in the chart.

(6) Step 6: To print the Pairwise Comparison chart, select "Print." To return to the DECMAT without sending the calculated weights to the matrix, select "Cancel."

(7) Step 7: Select the Send button. The computer calculates the weights for each of the Evaluation Criteria, imports the values to the DECMAT, and returns you to the DECMAT window.

c. The mathematical model which determines the criteria weighting is based on the Eigenvector method as described by Ching-Lai Hwang and Kwangsun Yoon in their monograph Lecture Notes in Economics and Mathematical Systems (186: Multiple Attribute Decision Making: Methods and Applications) (Springer-Verlag, Berlin, 1981). The methodology for solving the Eigenvalues for a specific Eigenvector is described by Anthony J. Pettofrezzo in his book, Matrices and Transformations (Dover Publications, Inc., New York, 1966).

8. Override of Criteria Weights.

a. To override one or more of the Pairwise-Comparison-calculated weights, select Criteria Weights from the Matrix menu. Understand, however, that overriding the Pairwise Comparison weights will introduce an element of subjectivity to the matrix.

b. The "Weight of Evaluation Criteria" screen will appear listing the Evaluation Criteria and their weights.

c. To enter a different weight, delete the Pairwise-Comparison-calculated weight and insert the new value for the weight.

d. Select Print to print the revised weights.

e. Select Cancel to return to the DECMAT. The original weights will remain unchanged.

f. Select Override Off to return to the Pairwise Comparison screen. The original weights will remain unchanged.

g. Select Send Values to input the revised values to the DECMAT and to return to the DECMAT screen.

9. Consistency Ratio.

a. After you have determined the criteria weights, the program determines the Consistency Ratio. The Consistency Ratio is a numerical value measuring how well the Pairwise Comparison values maintain a logical series of relationships. The program uses another mathematical model, based on the least squares method, to measure how well the logic fits.

b. The program shows the Consistency Ratio as a percentage below the right side of the DECMAT.

c. For this particular mathematical model, a Consistency ratio of 95% or more means the logic of the Pairwise Comparison is acceptable enough to use the resultant weights in the DECMAT.

***** NOTE: CAS3's previous version of the DECMAT program used a different mathematical model to model the logic, resulting in an acceptable Consistency Ratio threshold of 90%. The value of 90% in the older model is equivalent to 95% in the new version.***

d. Should you input the Pairwise Comparison so that the resultant Consistency Ratio is below 95%, an error box will appear alerting you of this fact. Re-evaluate your Pairwise Comparison for logic errors.

e. With a large number of Evaluation Criteria, the program model may not catch a single, obvious error in the Pairwise Comparison logic. This limitation to the model makes Step 5 of the Pairwise Comparison very important.

f. The mathematical model which determines the Consistency Ratio is based on the method described by Cliff T. Ragsdale in his book, Spreadsheet Modeling and Decision Analysis: A Practical Introduction to Management Science, 2d Edition (South-Western College Publishing, Stamford, Connecticut, 1997).

10. Sensitivity Analysis.

a. Sensitivity analysis identifies the degree to which the DECMAT results are subject to change with only small changes in the evaluation criteria weights. A solution which is not sensitive to changes in weights provides the decision-maker with confidence that he or she has a valid solution.

b. Together with the Consistency Ratio, Sensitivity Analysis is a measure of the DECMAT's subjectivity. A solution that is "sensitive" to changes in weights is a red flag for the decision-maker to re-evaluate the relationships among the Evaluation Criteria. With a sensitive solution, the decision-maker must review the pairwise relationships of the criteria to see if the criteria relationships really reflect how the decision-maker feels. In other words, the decision-maker must develop confidence in the criteria weighting.

c. The program conducts sensitivity analysis by changing each Evaluation Criterion weight independently, within the range of plus or minus three points, and recalculates the matrix to determine whether the solution changes. The program does not re-calculate when the weights are taken below the value of 1.00. The program resets the criterion weight to its original value before proceeding on to analyze the sensitivity of the next Evaluation Criterion.

d. EXAMPLE: For an Evaluation Criterion weight of 2.38, the program:

(1) Sets the weight incrementally lower (e.g., 2.37, 2.36, etc.), recalculates, and determines the weight where the solution may change. NOTE: In this example, the program does not set the value lower than 1.00 and therefore does not complete the calculation within the full range of -3.

(2) Sets the weight incrementally higher (e.g., 2.39, 2.40, etc.), recalculates, and determines the weight where the solution may change. Stops calculating at the weight of 5.58 to complete the range of +3.

(3) Resets the weight to the original value of 2.38 and moves to analyze the next Evaluation Criterion.

e. To conduct a Sensitivity Analysis, drag down on the "Matrix" menu and select "Sensitivity Analysis.

f. The Sensitivity Analysis screen will appear with the completed results.

(1) To print the Sensitivity Analysis, select “Print.”

(2) To return to the DECMAT screen, select “OK.”

11. Reordering The Matrix.

a. By convention, show the Evaluation Criteria in decreasing order of weight from left to right in the matrix.

b. To reorder a Evaluation Criterion, place the cursor along the top of the matrix above the Evaluation Criterion desired until a hand appears. Click and drag the hand to the desired location for the Evaluation Criterion and release the mouse button. The Evaluation Criterion will be “dropped” at that location, reordering the Evaluation Criteria as a column.

c. Reorder the Courses of Action in similar manner.

12. Matrix Output.

a. The DECMAT program calculates the totals of each Course of Action and shows the values in the far right column of the matrix. The program re-calculates the totals whenever a value is changed.

b. The type of matrix selected (Relative Value or Multiplication) is shown at the bottom right of the matrix.

c. The Consistency Ratio also appears at the bottom right of the matrix.

d. The program circles the recommended solution (the smallest total value).

e. Should the total values be extremely large or small such that the number, the program sets the total values to the same order of magnitude (power of 10) and shows this power of 10 at the bottom right of the matrix. An exception to this occurs when the difference in the numbers is greater than 108.

f. You may print the DECMAT, showing all comments at the matrix’s bottom right, by selecting the printer button along the tool bar or by dragging down on the “File” menu and selecting “Print.”

g. You may print the Pairwise Comparison chart by dragging down on the “Matrix” menu and selecting “Criteria Weights.” When the Pairwise Comparison screen appears, review the values to ensure they are correct and select “Print.”

h. You may print the Sensitivity Analysis by dragging down on the “Matrix “menu and selecting “Sensitivity Matrix.” When the Sensitivity Matrix screen appears, select “Print.”

13. Saving Data. To save your file:

a. Select the disc button on the tool bar or drag down on the “File” menu and select “Save.”

b. Name the file as a “*.dec” file.

c. Select the correct directory and select “OK.”

d. To resave a file, select the disc button on the tool bar or drag down and select Resave. Follow the same procedure as above.

14. Importing to PowerPoint.

a. There is no direct method to import the matrix to PowerPoint.

b. To depict the decision matrix in a PowerPoint presentation:

(1) Open PowerPoint concurrently with the Decmat program.

(2) Print Screen in the Decmat program.

(3) Select Paste in PowerPoint.

(4) The Decmat screen will appear in a bit map format in PowerPoint.

c. As the bit map format is memory intensive, one may:

(1) Crop out the tool bar portion of the Decmat screen using the Crop Picture function of PowerPoint.

(2) Resize the matrix to fit using the object corner.