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The Journal of Health Care Finance
Fall 2015

The Essential Correlation Between Capital Formation and the Building Of Value Metrics in ACOs

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I. ABSTRACT

As the U.S. healthcare delivery system continues to evolve from a volume-driven payment system toward an outcome-centered, value-based reimbursement system, developing a sustainable financial model is vital and will necessitate complex, detailed analyses of the challenges and opportunities involved in supporting the investment in a new *accountable care organization* (ACO). Since the passage of the *Affordable Care Act* (ACA) in 2010, the number of emerging healthcare organizations, such as ACOs, which have developed to address this shift to value-based purchasing, has grown from 41 to over 600.¹ Healthcare decision makers seeking to establish an ACO are well served by first developing a financial plan that will afford the organization adequate capital funding necessary for both the ACO's initial capital investment and for working capital to finance ongoing operations until the new ACO generates sufficient revenues to become self-sustaining.

This paper provides an overview of the *capital concepts* related to the investment categories pertinent to the development of ACOs, as well as, the decision-making process involved in attracting, structuring, allocating, and budgeting the requisite capital. It also presents the concept of *value metrics* with a discussion of cash flows and feasibility analysis, and the various analytical methods related to determining the financial feasibility of, and value in, developing an ACO. The paper concludes with a brief synopsis of relevant regulatory considerations involved in ACO capital formation that should be addressed in the development, implementation, and operation of an ACO, e.g., *Anti-kickback Statute, False Claims Act, Stark Law, Fraud and Abuse, Antitrust, and Tax Exempt Status.*

II. INTRODUCTION

As the U.S. healthcare delivery system continues to evolve from a volume-driven payment system toward an outcome-centered, value-based reimbursement system, developing a sustainable financial model is vital and will necessitate complex, detailed analyses of the challenges and opportunities involved in supporting the investment in a new *accountable care organization* (ACO). Since the passage of the *Affordable Care Act* (ACA) in 2010, the number of emerging healthcare organizations, such as ACOs, which have developed to address this shift to value-based purchasing, has grown from 41 to over 600.² Healthcare decision makers seeking to establish an ACO will be well served by first developing a financial plan that will afford the organization adequate capital funding necessary for both the ACO's initial capital investment, as

1 "Growth and Dispersion of Accountable Care Organizations: August 2013 Update," By Matthew Petersen, Leavitt Partners, 4 (2013); "More partnerships between doctors and hospitals strengthen coordinated care for Medicare beneficiaries," Press Release, U.S. Department of Health & Human Services, Dec. 23, 2013, <http://www.hhs.gov/news/press/2013pres/12/20131223a.html>; "Accountable Care Growth in 2014: A Look Ahead," David Muhlestein, HealthAffairs Blog, Jan. 29, 2014, <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/>.

2 "Growth and Dispersion of Accountable Care Organizations: August 2013 Update," By Matthew Petersen, Leavitt Partners, 4 (2013); "More partnerships between doctors and hospitals strengthen coordinated care for Medicare beneficiaries," Press Release, U.S. Department of Health & Human Services, Dec. 23, 2013, <http://www.hhs.gov/news/press/2013pres/12/20131223a.html>; "Accountable Care Growth in 2014: A Look Ahead," David Muhlestein, HealthAffairs Blog, Jan. 29, 2014, <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/>.

well as, the working capital to finance ongoing operations until the new ACO generates sufficient revenues to become self-sustaining.³ The development and implementation of a new ACO also requires significant investment in: (1) information technology (IT) and administrative systems; (2) an expansion of human resources; (3) financial reserves to cover the risk of financial loss; and, (4) funding of capital needs for other purposes.

This paper provides an overview of *capital concepts* related to three of the four aforementioned investment categories, as well as, the decision-making process involved in attracting, structuring, allocating, and budgeting the requisite capital. It also presents the concept of *value metrics* with a discussion of cash flows and feasibility analysis, and the various analytical methods relating to determining the financial feasibility of, and value in, developing an ACO. Included in that discussion are the benefits of positive externalities, i.e., value to society; value to providers; and, value to payors. The paper concludes with a brief synopsis of relevant regulatory considerations involved in ACO capital formation that should be addressed in the development, implementation, and operation of an ACO, e.g., *Anti-kickback Statute, False Claims Act, Stark Law, Other Fraud and Abuse Laws, Antitrust, and Tax Exempt Status*.

III. BACKGROUND

Over the past seven years, since the U.S. economy encountered the massive disruption in financial and capital markets, referred to as the “*Great Recession*”, it has become increasingly important to consider the opportunities, limitations, and availability of funding sources for new ACOs in selecting a strategy that best reflects the market realities in which the aspiring new healthcare organization will operate. The strategy ultimately selected should demonstrate capability and capacity to avoid capital shortfalls that may curtail the new ACO’s implementation or limit opportunities for future expansion. A successful ACO will need to produce incremental revenue sufficient to offset the incremental increase in operational expenses and capital costs associated with the formation of an ACO. Often, this is achieved by means of increasing operating efficiencies and maximizing revenue through enhanced reimbursement yield, as well as by realizing shared savings incentive payments, which may be negotiated among the ACO’s providers, payors, and/or the federal government, as well as memorialized in the ACO’s contracts.

Emerging healthcare organizations typically rely on three sources of capital funding: (1) debt; (2) equity; and/or, (3) internally generated surpluses from revenue. These financing options include various types of capital instruments, such as: (1) short-term financing; (2) taxable long-term financing; (3) tax-exempt bond financing; and, (4) private and public equity markets. Selecting the optimal combination of each of the sources of capital depends upon the following factors: (1) the types of financing required; (2) the size and make-up of the organization; and, (3) the tax posture of the entity.

3 “The Accountable Care Organization: Whatever Its Growing Pains, the Concept Is Too Vital to Fail,” By Francis J. Crosson, 30 Health Affairs 7, 1252 (2011).

Historically, healthcare enterprises have obtained capital financing from various sources, including “*philanthropic donations, public grants, tax-subsidized operating surpluses, and investments from nonprofit organizations based in other industries,*” most of which are now declining in availability and use.⁴ The last four decades have seen a rise in for-profit healthcare enterprises, whose financing characteristics are unique from those of non-profit healthcare enterprises, the differences which may be reflected in their respective missions. For-profit healthcare enterprises typically depend on a combination of *equity* and *debt capital* to finance projects, expansions and/or operations. Access to *publicly traded equity markets* by for-profit healthcare organizations may provide the ability to accumulate large sums of capital based upon the fluctuating value of their equity.⁵ Access to *publicly traded equity markets* may be attained through: (1) an *initial public offering* (IPO); or, (2) by a *secondary equity offering* (SEO) for companies already traded in public markets.

In contrast, non-profit healthcare enterprises typically rely more heavily on: (1) government grants; (2) donations; (3) philanthropy; (4) tax breaks; and, (5) traditional debt.⁶ However, due to regulatory restrictions, these non-profit enterprises may not be eligible to participate in *publicly traded equity markets*.⁷ These ineligible enterprises may, alternatively, raise capital funds through:

- (1) Tax-exempt bonds to finance their strategic initiatives, operations, and other capital-related needs;
- (2) Charitable donations from both organizations and individuals; and,
- (3) Leveraging significant flows of cash deposits into favorable financing terms from lender institutions, both on an interim basis or through a more permanent lending relationship.

Both for-profit and non-profit organizations may also enter *private capital markets* through: (1) venture capital investors; (2) buyout funds; (3) private real estate investment trusts (REITs); and, (4) conduit lending structures. These *private capital markets* may allow healthcare organizations to access equity capital without subjecting the organization to the onerous regulations and reporting requirements of *publicly traded equity markets*.

III.A *The 2007-2009 Great Recession’s Lingering Effects On Capital Formation*

Healthcare enterprises do not operate in a vacuum, and their access to capital is significantly affected by developments in the general national economy and capital markets. Likewise, capital markets do not operate in a vacuum, as wide ranging factors impacting the global economy can echo through capital markets and affect their functioning across industries. The

4 “Capital Finance and Ownership Conversions in Health Care,” By James C. Robinson, 19 Health Affairs 1, 57 (2000).

5 “Healthcare Capital Finance In Good and Challenging Times,” David A. Lips, American Health Lawyers Association: 2009, p. 8.

6 “Conversion of HMOs and Hospitals: What’s at Stake?” Bradford H. Gray, Health Affairs, Vol. 16, Issue 2 (1997), p. 31.

7 “An Examination of Contemporary Financing Practices and the Global Financial Crisis on Nonprofit Multi-Hospital Health Systems,” Louis J. Stewart & Pamela C. Smith, Journal Health Care Finance Vol. 37, Issue 3 (2011), p. 1.

interconnectedness of worldwide financial markets warrants an assessment of the recent history of the world economy in order to better understand its impacts on the U.S. economy, and in turn, its *spillover* effects on the U.S. healthcare industry.

The two-year period between 2007 and 2009, referred to as the *Great Recession*, endured a significant dislocation of output, employment, and financial markets in the U.S., during which real *gross domestic product* (GDP) growth slowed and the number of unemployed workers increased. Although the *Great Recession* ostensibly ended in 2009, the lingering effects of this financial crisis still reverberate throughout the U.S. economy and the healthcare market. While financial market data and home values indicate that certain sectors of the U.S. economy have begun to recover from the *Great Recession*, other data sources suggest that the post-recession period of sluggish growth will likely continue for the next several years, with the corresponding negative impact on the availability and cost of capital.

In the wake of the economic turmoil of the 2007-2009 *Great Recession*, the anticipated economic recovery has been optimistically characterized by some as “*sluggish*,” while others assert that it can be considered “*non-existent*.” The weakened U.S. economy has led to a *spillover* of the negative impacts of slow growth and the dampened consumer outlook of the recession into aspects of the healthcare market, due to the previously discussed interconnectedness of financial markets.

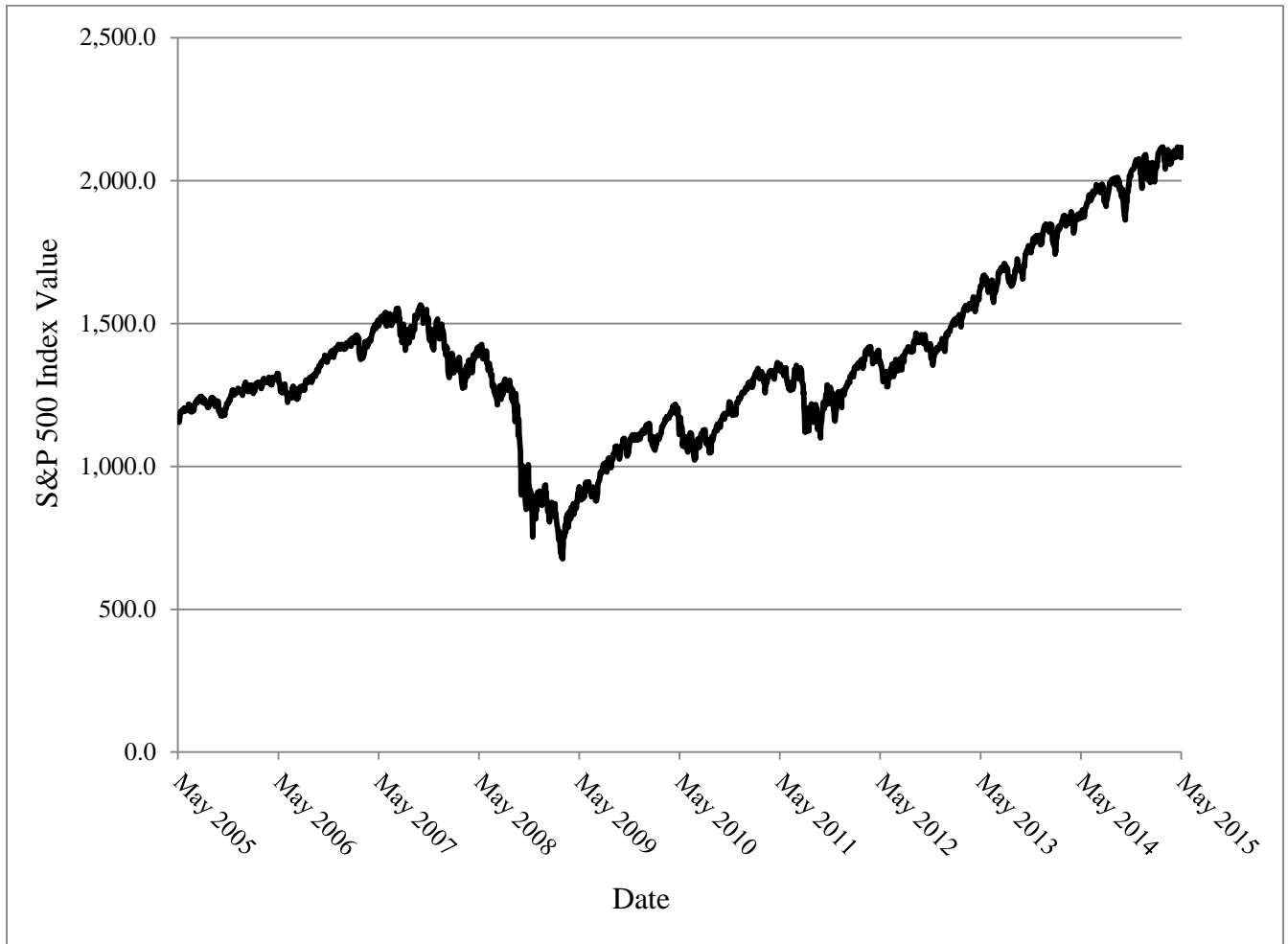
Financial markets, in large part, have returned to, and have exceeded, their pre-recession levels. On October 9, 2007, on the eve of the *Great Recession*, the Standard & Poor’s (S&P) 500 Index achieved its pre-recession peak of 1,565.15.⁸ By March 28, 2013, the S&P 500 Index had returned to its pre-recession level, and, since April 23, 2013, has remained above the pre-recession peak.⁹ The post-recession peak for the S&P 500 Index closed at 2,116.1 (on May 8, 2015), a 35.2 percent increase over the pre-recession high (or approximately 4.06% growth annually).¹⁰ Exhibit 1: *Historical Daily Values of the S&P 500 Index*, below, sets forth the historical daily values of the S&P 500 Index from January 3, 2000, to March 9, 2015.

8 “S&P 500 Stock Price Index (SP500)” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SP500#> (Accessed 5/11/15).

9 “S&P 500 Stock Price Index (SP500)” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SP500#> (Accessed 5/11/15).

10 “S&P 500 Stock Price Index (SP500)” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SP500#> (Accessed 5/11/15).

EXHIBIT 1: HISTORICAL DAILY VALUES OF THE S&P 500 INDEX¹¹



However, real GDP, a broad measure of the inflation adjusted economic output generated by a country, has exhibited much slower growth over the same time period. In the pre-recession period (first quarter 2002 through the third quarter 2007),¹² the growth rate in GDP averaged 2.70 percent annually.¹³ In the post-recession period (third quarter 2009 through first quarter 2015)¹⁴ average annual growth in GDP has been 1.9 percent, and has been equal to or greater than the pre-recession average in only seven of the 29 quarters (by an average of 0.17 percent) during the post-recession period.¹⁵

11 "S&P 500 Stock Price Index (SP500)" Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SP500#> (Accessed 5/11/15).

12 The pre-recession period was selected to exclude the impact of the 2001 recession. "US Business Cycle Expansions and Contractions," National Bureau of Economic Research, Apr. 23, 2012, http://www.nber.org/cycles/US_Business_Cycle_Expansions_and_Contractions_20120423.pdf.

13 "Real Gross Domestic Product, 3 Decimal" Economic Research Federal Reserve Bank of St. Louis, April 29, 2015, <http://research.stlouisfed.org/fred2/series/gdpc96> (Accessed 5/18/2015).

14 Based on the official end date for the Great Recession as reported by the National Bureau of Economic Research and the most recent data available as of this publication. "Real Gross Domestic Product (GDPC1)", Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/GDPC1> (Accessed 2/5/14).

15 "Real Gross Domestic Product, 3 Decimal" Economic Research Federal Reserve Bank of St. Louis, April 29, 2015, <http://research.stlouisfed.org/fred2/series/gdpc96> (Accessed 5/18/2015).

The recovery of labor markets in the U.S. has been similarly anemic. The pre-recession average monthly unemployment rate (over the non-recession period of January 2003 through October 2007) equaled 5.2 percent.¹⁶ This monthly unemployment rate rose to an average of 8.0 percent in the post-recession period (July 2009 through April 2015),¹⁷ and reached a maximum value of 10.0 percent¹⁸ in November 2009. The most recent measurement (as of April 2015) equaled 5.4 percent,¹⁹ indicating that the unemployment rate is just beginning to normalize.

While the declining trends in the rate of unemployed individuals may be seen as hopeful, the methodology employed in the collection of employment data may be acting to disguise a more dire reality. The headline unemployment rate reported by the Bureau of Labor Statistics (BLS), and typically focused on by various media outlets, reflects the number of individuals currently employed as a percent of all individuals *actively seeking employment*. Specifically, an unemployed person is one that: (1) is aged 16 or older; (2) was not employed during the reference week; (3) was available for work; and, (4) had made specific efforts to find employment sometime during the four-week period ending with the reference week.²⁰ As a result, improvements in the headline unemployment rate may be caused by: (1) increases in the number of individuals currently employed; or, (2) decreases in the number of individuals actively seeking employment.

The first alternative represents an optimistic outlook on the decreasing unemployment rate in the U.S., i.e., more people are employed than previously. However, the second alternative represents a more pessimistic perspective, i.e., the same low level of employment still exists, but a larger population is no longer considered to be participating in the labor force. The unemployment rate alone is insufficient to discern which of these alternatives accurately reflects the current labor market because it does not account for those workers who are not actively engaged in the work force, and have not looked for a job during the four-week period ending with the reference week, i.e., *marginally attached* or *discouraged workers*.²¹

An alternative metric often employed by economists is to consider the employment to population ratio as a measure of an economy's utilization of its available labor resources. To correct for the effects of any demographic trends, e.g., the increasing pace of the *Baby Boomer* generation exiting the workforce, it is convenient to utilize the employment to population ratio for the

16 "Labor Force Statistics from the Current Populations Survey: Original Data Value," Bureau of Labor Statistics, United States Department of Labor, <http://data.bls.gov/timeseries/LNS14000000> (Accessed 1/27/14).

17 The beginning and ending dates for the pre-recession period and the post-recession period were calculated based upon the same methodology utilized for GDP.

18 "Labor Force Statistics from the Current Populations Survey: Original Data Value," Bureau of Labor Statistics, United States Department of Labor, <http://data.bls.gov/timeseries/LNS14000000> (Accessed 1/27/14).

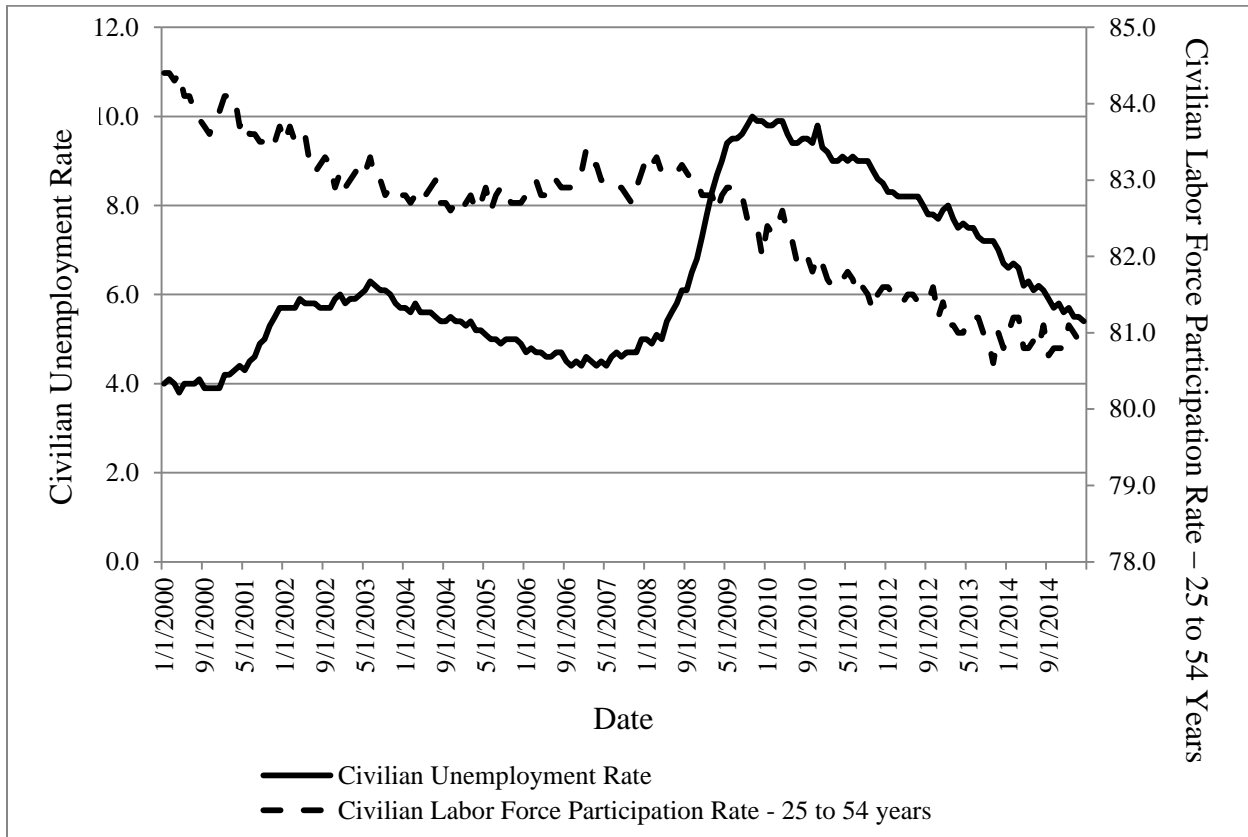
19 "Labor Force Statistics from the Current Populations Survey: Original Data Value," Bureau of Labor Statistics, United States Department of Labor, <http://data.bls.gov/timeseries/LNS14000000> (Accessed 1/27/14).

20 "Glossary," Bureau of Labor Statistics, United States Department of Labor, <http://www.bls.gov/bls/glossary.htm> (Accessed 2/4/14).

21 "Ranks of Discouraged Workers and Others Marginally Attached to the Labor Force Rise During Recession," Bureau of Labor Statistics, United States Department of Labor, <http://www.bls.gov/opub/ils/ils74abs.htm> (Accessed 2/4/14); "Measuring Available and Underutilized Labor Resources," By Valletta, Federal Reserve Bank of San Francisco, <http://www.frbsf.org/economic-research/publications/economic-letter/2000/march/measuring-available-and-underutilized-labor-resources/> (Accessed 2/4/14); "Glossary," Bureau of Labor Statistics, United States Department of Labor, <http://www.bls.gov/bls/glossary.htm> (Accessed 2/4/14).

subsection of the population that is within a range that could be considered “working age.” Toward that end, the U.S. Federal Reserve Bank reports reliable statistics on the level of employment and the population level for the segment of the U.S. population between the ages of 25 and 54. From these two statistics, the employment to population ratio for the 25 to 54 year old segment of the population can be calculated. Exhibit 2: *Historical Trends in the U.S. Labor Market*, below, sets forth the historical trend in the monthly (adjusted for seasonal effects) employment to population ratio for the 25 to 54 year old segment, as well as the unemployment rate for the years 2000 to 2015.

EXHIBIT 2: HISTORICAL TRENDS IN THE U.S. LABOR MARKET²²



As illustrated above in Exhibit 2, while the post-recession period has exhibited a decreasing trend in unemployment, the employment to population ratio has remained stubbornly low compared to the pre-recession trend. Monthly employment to population ratios during the pre-recession period averaged 83.2 percent (1/1/2001 through 11/1/2007), while the same metric during the post-recession period has averaged 81.5 percent (7/1/2009 through 4/1/2015), a significantly lower rate that, based on the 1/1/2014 population estimate, equates to a decrease in

22 “Civilian Unemployment Rate (UNRATE),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/UNRATE> (Accessed 3/10/15); “Employment Level - 25 to 54 years (LNS12000060),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/LNS12000060> (Accessed 3/10/15); “Civilian Noninstitutional Population - 25 to 54 years (LNU00000060),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/LNU00000060> (Accessed 3/10/15).

the labor force of approximately 1,708,000 individuals.²³ The divergence between these two employment metrics implies that the improvement seen in the unemployment rate is likely the result of a decreasing population actively seeking employment, i.e., an increase in the number of so called *discouraged workers*.

The ominous implications of these trends in the U.S. economy have spilled over into investor perceptions of the market risks inherent in the healthcare industry, which has heretofore often been considered impervious to economic downturns in the broader market. Two potential consequences of the reduced number of employed individuals are reduced levels of insurance coverage for many Americans, and/or a significant diminution of the unemployed population's access to health insurance. In 2010-2011, 59.5 percent of the U.S. population had employer-sponsored health insurance, down from 69.7 percent in 1999-2000.²⁴ The percentage of employers offering employer-sponsored health insurance similarly decreased from 58.9 percent in 1999-2000 to 52.4 percent in 2010-2011.²⁵ The Joint Economic Committee of the United States Congress cited similar figures in its 2011 report, entitled, "*Health Care Coverage at Record Low*," blaming a significant portion of the reported decline in employer-sponsored insurance on the *Great Recession*.²⁶ This reduction in employment-based insured individuals has the dual effect on healthcare enterprises of: (1) reducing demand for healthcare services, due to greater out of pocket expenses for individuals; and, (2) increasing the proportion of the population that is uninsured, thereby increasing the perception of risk inherent in healthcare investment opportunities. With the advent of healthcare reforms such as the Medicaid expansion and the opening of the health insurance exchanges, this trend has been largely mitigated. A recent Gallup poll reports 11.9% uninsured in the U.S. in the first quarter of 2015, down from 17.1% at the end of 2013.²⁷

In addition to the negative ramifications of reduced employment, it is likely that *debt overhang*, resulting from the *Great Recession*, continues to reduce the overall amount of spending in the U.S., including healthcare-specific spending. As declared by economist and former U.S. Treasury Secretary Lawrence Summers, the U.S. may be entering a period of *secular stagnation*, defined as:

*"[A period in which] sluggish growth and output, and employment levels well below potential, might coincide for some time to come with problematically low real interest rates."*²⁸

23 "Civilian Unemployment Rate (UNRATE)", Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/UNRATE> (Accessed 2/4/14); "Employment Level - 25 to 54 years (LNS12000060)", Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/LNS12000060> (Accessed 2/4/14); "Civilian Noninstitutional Population - 25 to 54 years (LNU00000060)", Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/LNU00000060> (Accessed 2/4/14).

24 "State-Level Trends in Employer-Sponsored Health Insurance: A State-by-State Analysis," State Health Access Data Assistance Center, SHADAC Report (2013), p. 15.

25 "State-Level Trends in Employer-Sponsored Health Insurance: A State-by-State Analysis," State Health Access Data Assistance Center, SHADAC Report (2013), p. 15.

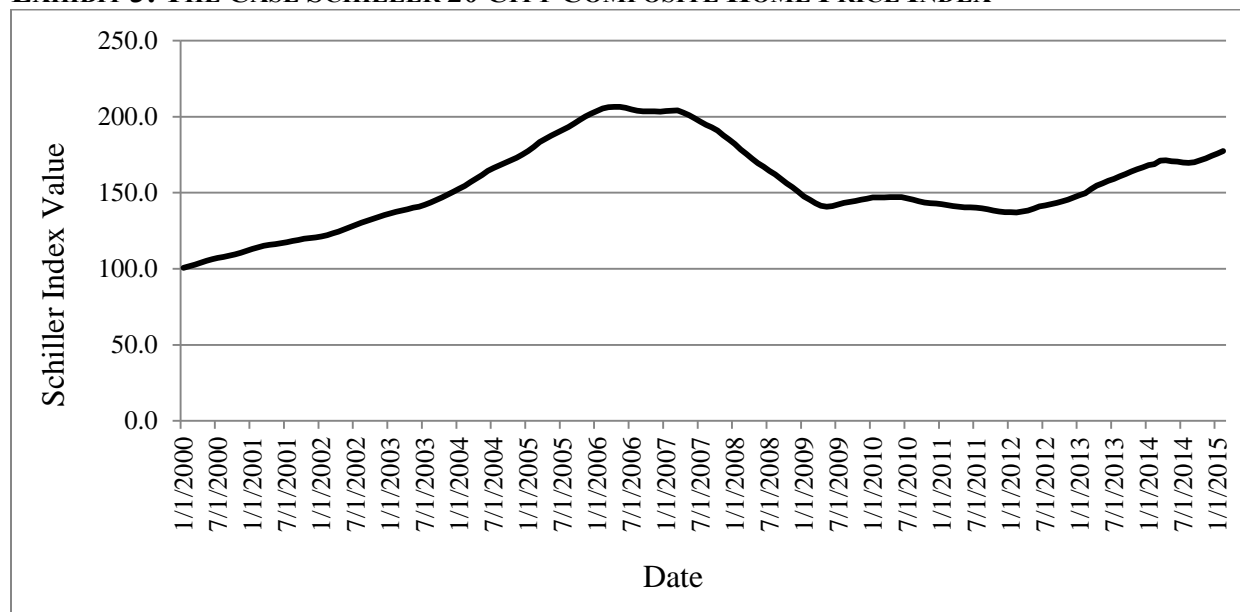
26 "Health Care Coverage at Record Low," U.S. Congress Joint Economic Committee, (Sept. 13, 2011), available at http://www.jec.senate.gov/public/?a=Files.Serve&File_id=d35dc4dc-9762-4a91-94b5-eb83a2a17772 (Accessed 1/27/14), p. 2.

27 "In U.S., Uninsured Rate Dips to 11.9% in First Quarter" By Jenna Levy, Gallup, April 13, 2015, <http://www.gallup.com/poll/182348/uninsured-rate-dips-first-quarter.aspx> (Accessed 5/15/2015).

28 "Strategies for Sustainable Growth," Lawrence Summers, Washington Post, Jan 5, 2014, http://www.washingtonpost.com/opinions/lawrence-summers-strategies-for-sustainable-growth/2014/01/05/9143313c-74b9-11e3-8b3f-b1666705ca3b_story.html (Accessed 2/4/14).

One theory that potentially explains the causal relationship between the roots of the *Great Recession* and the subsequent slow recovery is the impact of the *debt overhang*.²⁹ As discussed above, the *Great Recession* resulted, in large part, from the collapse of the U.S. housing market. In addition to the shockwaves the collapse sent through financial markets (which shockwaves have largely subsided), the collapse also created a significant *debt overhang* among many U.S. households, caused by the rapid decrease in the value of their real estate assets without a corresponding decrease in the debt obligations attached to those assets. One measure of U.S. housing values is the S&P/Case Schiller 20 City Composite Home Price Index (Schiller Index). The pre-recession peak for the Schiller Index was 206.6 (April 2006),³⁰ while the post-recession period peak recently reached 177.4 (February 2015),³¹ reflecting a 14.15 percent decline in housing value. Exhibit 3: *The Case Schiller 20 City Composite Home Price Index*, below, sets forth the historical monthly Schiller Index values for the January 2000 to January 2015 period.

EXHIBIT 3: THE CASE SCHILLER 20 CITY COMPOSITE HOME PRICE INDEX³²



This decline in the value of real estate assets without a concurrent decrease in the debt attached to the asset has often resulted in homeowners being *underwater* on their home investment, leading to a default on their debt obligation. Potentially as equally damaging to the economy, are households which may not technically be *underwater* on their home loan, but which, as a result

29 “Paul Krugman, What Janet Yellen – And Everyone Else – Got Wrong,” New York Times, Aug. 8, 2013, http://krugman.blogs.nytimes.com/2013/08/08/what-janet-yellen-and-everyone-else-got-wrong/?_php=true&_type=blogs&_r=0.
 30 “S&P Case-Schiller 20-City Home Price Index (SPCS20RSA),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SPCS20RSA> (Accessed 3/10/15).
 31 “S&P Case-Schiller 20-City Home Price Index (SPCS20RSA),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SPCS20RSA> (Accessed 3/10/15).
 32 “S&P Case-Schiller 20-City Home Price Index (SPCS20RSA),” Economic Research Federal Reserve Bank of St. Louis, <http://research.stlouisfed.org/fred2/series/SPCS20RSA> (Accessed 5/11/15).

of the *Great Recession*, and the consequent decline in the value of their real estate assets, now find the value of their outstanding debt relative to the value of the assets owned by the household to be significantly higher than has historically existed.

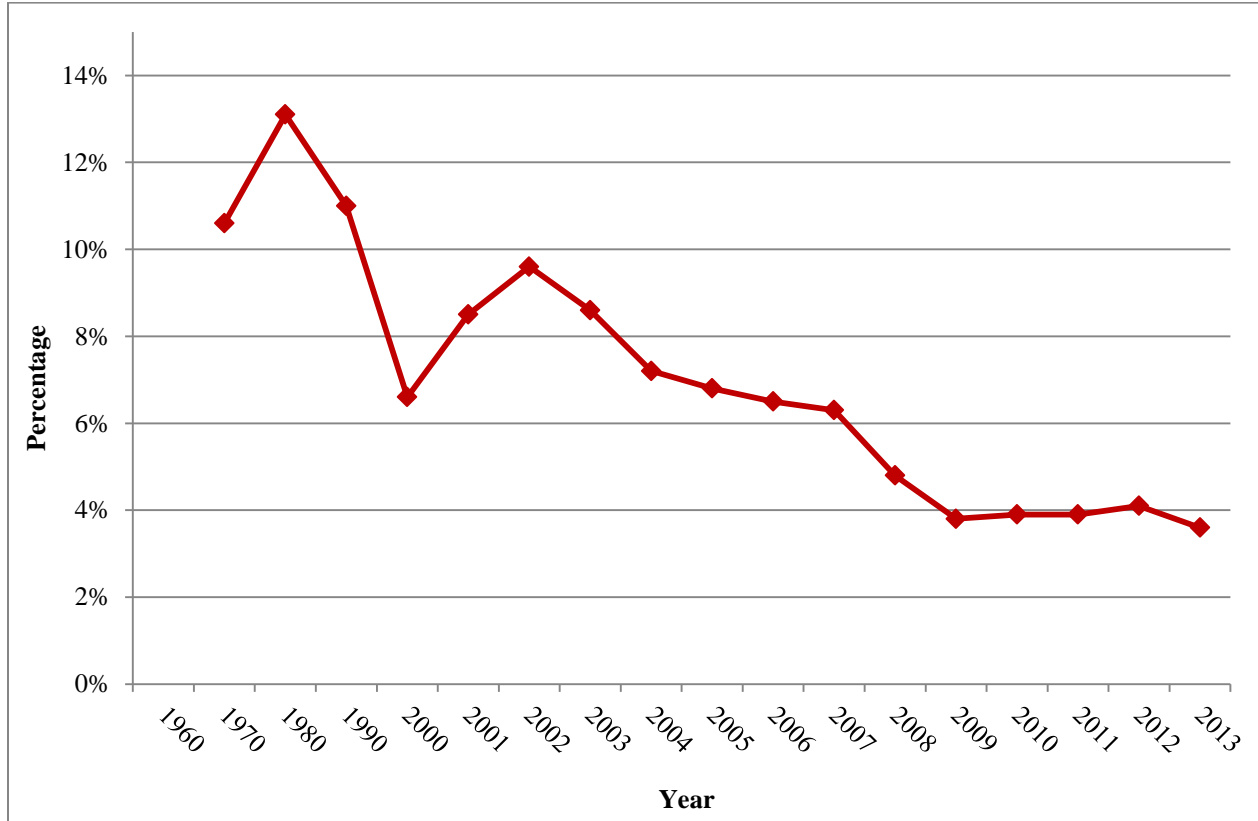
One method which may be employed by households to alleviate the discomfort realized by this altered ratio of debt to assets may be to defer current consumption spending in favor of reducing outstanding debt. Large purchases of durable goods and luxury items, or high ticket discretionary healthcare expenditures, may be postponed, as excess income is diverted from household spending to household debt reduction or savings. The persistence of depressed demand for consumer goods by households may be a leading cause of the continued slow growth in the U.S. economy. Until U.S. households have worked themselves out from under the post-recession *debt overhang*, it is likely that this pattern of *secular stagnation* will continue.

Additionally, spending shortfalls, especially prevalent in healthcare, can be explained and quantified using the *Income Elasticity of Demand*, a measure of the responsiveness of the demand for healthcare services to fluctuations in income. The income elasticity metric signifies the expected, based on historical trends, percent change in the quantity of healthcare services demanded resulting from a one percent increase in income. As such, positive income elasticity indicates that demand for healthcare services moves in tandem with income. Reductions in income, consequently, should result in fewer quantities demanded. Economists typically refer to these goods as *normal goods*. A 2002 Rand Corporation article estimates the elasticity of demand for healthcare services to be between 0.5 and 0.8, implying that healthcare services can be considered a *normal good*.³³ Accordingly, the decreasing income of many individuals due to the increased level of *under*-employment should be projected to impact the healthcare market by undermining demand for healthcare services.

Overall healthcare spending has slowed over the past few years, as illustrated in Exhibit 4: *Average Annual Percentage Change in National Health Expenditures, 1960-2013*.

33 “The Elasticity of Demand for Health Care: A Review of the Literature and Its Application to the Military Health System,” By Jeanne S. Ringel, et al., RAND Health & National Defense Research Institute (2005), p. 27-28.

EXHIBIT 4: AVERAGE ANNUAL PERCENTAGE CHANGE IN NATIONAL HEALTH EXPENDITURES, 1960-2013³⁴



As illustrated by Exhibit 4, above, U.S. healthcare spending has risen at an annual rate of 3.9 percent since the passage of the ACA (from 2010 to 2013), in contrast to the decade before the ACA (from 2000 to 2009), during which national healthcare spending grew approximately 6.9 percent per annum.³⁵ Similarly, as illustrated below in Exhibit 5, national health expenditures as a percentage of the GDP increased an average of 0.44% from 2000 to 2009, and only an average of 0.01% from 2010 to 2013.³⁶ Several potential factors have been attributed to this current stagnation in healthcare spending, including:

- (1) *The Great Recession*;
- (2) The ACA, also known as “*Obamacare*”;
- (3) The recent patent expirations of “*blockbuster drugs*,” termed the “*patent cliff*”;³⁷
- (4) Job loss;³⁸

34 “Table 1 - National Health Expenditures; Aggregate and Per Capita Amounts, Annual Percent Change and Percent Distribution: Selected Calendar Years 1960-2013” from “NHE Tables,” Centers for Medicare & Medicaid Services, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet.html> (Accessed 3/10/15).

35 “The Slowdown In Health Care Spending In 2009–11 Reflected Factors Other Than The Weak Economy And Thus May Persist,” By Alexander J. Ryu et al., *Health Affairs* Vol. 32, Issue 5 (2013), p. 835.

36 “Table 1: National Health Expenditures; Aggregate and Per Capita Amounts, Annual Percent Change and Percent Distribution: Selected Calendar Years 1960-2013,” Centers for Medicare and Medicaid Services, Office of the Actuary, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html> (Accessed 3/10/15).

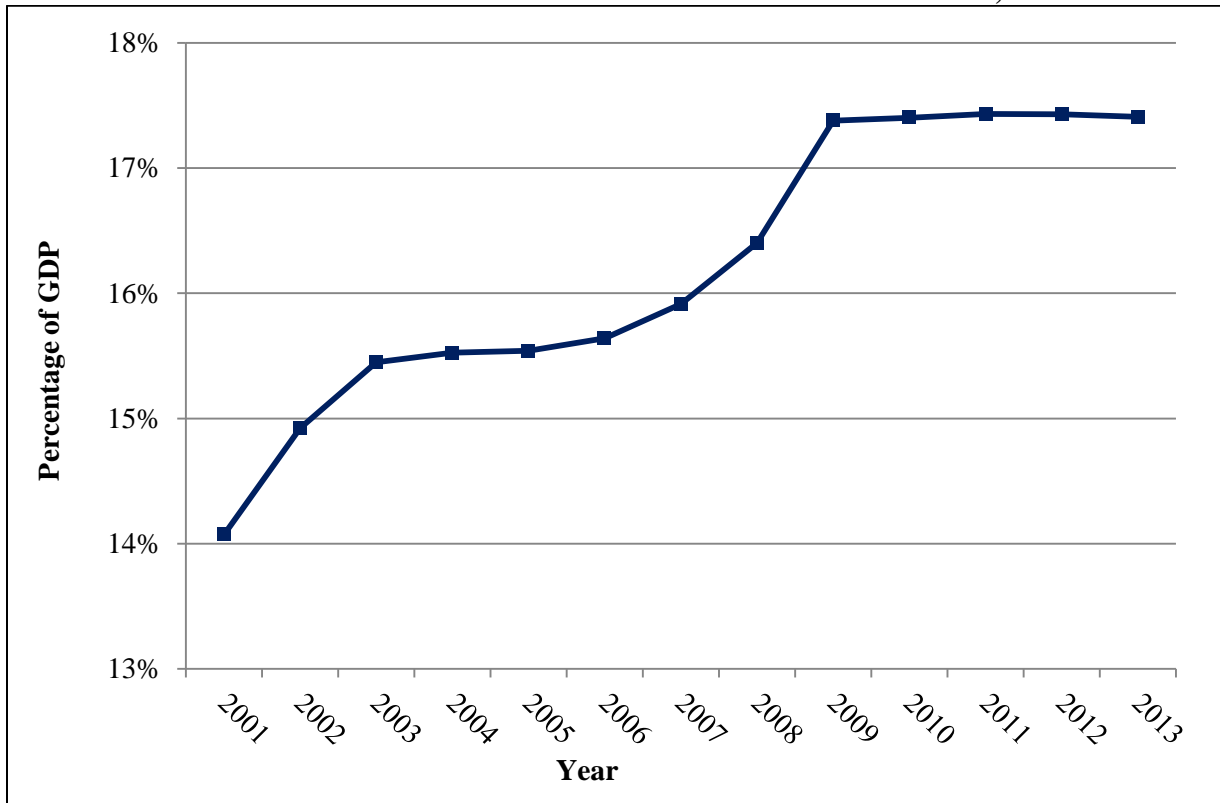
37 “National Health Spending in 2012: Rate of Health Spending Growth Remained Low for the Fourth Consecutive Year,” By Anne B. Martin, et al., *Health Affairs* Vol. 33, Issue 1 (2014), p. 69-70.

38 “National Health Spending in 2012: Rate of Health Spending Growth Remained Low for the Fourth Consecutive Year,” By Anne B. Martin, et al., *Health Affairs* Vol. 33, Issue 1 (2014), p. 835.

- (5) Changes in insurance benefits;³⁹ and,
- (6) Patient out-of-pocket spending increasing at a faster rate than payor spending, resulting in a larger burden of cost sharing between patients and their health insurance provider.⁴⁰

Similar to the slowing growth of national healthcare spending, healthcare expenditures as a share of the national GDP similarly receded from 2010 to 2013, as illustrated by Exhibit 5: *National Health Expenditures as a Percentage of GDP, 2000-2013*.

EXHIBIT 5: NATIONAL HEALTH EXPENDITURES AS A PERCENTAGE OF GDP, 2000-2013⁴¹



The decrease in the demand for healthcare, with the accompanying reduction in healthcare expenditures (possibly caused by the *debt overhang* from the *Great Recession*), continues to increase the perceived risks associated with healthcare investment opportunities. Healthcare entities facing decreasing demand for their products are less likely to invest in expansion,

39 “National Health Spending in 2012: Rate of Health Spending Growth Remained Low for the Fourth Consecutive Year,” By Anne B. Martin, et al., *Health Affairs* Vo. 33, Issue 1 (2014), p. 835.

40 “National Health Spending in 2012: Rate of Health Spending Growth Remained Low for the Fourth Consecutive Year,” By Anne B. Martin, et al., *Health Affairs* Vo. 33, Issue 1 (2014), p. 835; “2012 Health Care Cost and Utilization Report,” Health Care Cost Institute (2013) p. iii.

41 “Table 1: National Health Expenditures; Aggregate and Per Capita Amounts, Annual Percent Change and Percent Distribution: Selected Calendar Years 1960-2013,” Centers for Medicare and Medicaid Services, Office of the Actuary, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html> (Accessed 3/10/15).

reducing the growth rate in demand for labor and possibly leading to a persistently higher unemployment rate, which may, in turn, result in a further decrease in demand for goods.

The aforementioned drag on investment is becoming increasingly prevalent in the healthcare industry, as healthcare enterprises anticipated decreased capital budgets and capital spending in 2014. Approximately 42 percent of the healthcare organizations recently surveyed by Premier, Inc. projected a decrease in their entity's overall capital spending for 2014, a sharp increase from the 26 percent of healthcare organizations that reported a capital spending decrease in 2011.⁴²

One potential explanation for decreased capital budgets and capital spending by healthcare enterprises may be the constraint on obtaining financing through traditional bank lending and bond markets. As a result of the recent financial crisis, investor *flight to quality*, defined as the tendency of investors to shift capital allocations to less risky assets (e.g., from equity to bonds) during periods of financial uncertainty, has depressed interest rates.⁴³ This rebalancing of portfolios has augmented the supply of loanable funds and kept borrowing costs low. Federal Reserve oversight and international banking standards have motivated many banks to increase their holdings of reserves and strip their portfolio of riskier loan assets. In addition to hedging against default risks, many banks have increased the burden of loan covenants on new debt, consequently increasing the *implicit* borrowing costs through draconian lending policies with strict capital reserve and cash flow requirements, while also maintaining lower *explicit* interest costs. As banks adjust lending policies in the *flight to quality*, hospitals may find access to traditional sources of capital, i.e., funds from banks or financial services companies, more difficult to access.

The self-imposed austerity of U.S. households resulting from the *debt overhang* (if not mitigated by increased spending from other sectors, e.g., government stimulus) may continue to diminish aggregate output (i.e., GDP) and employment. Two significant conclusions can be drawn from the above analysis: (1) the full recovery of the U.S. economy will not occur until households have worked themselves out from under the *debt overhang*, an event which may not occur for some time; and, (2) once the *debt overhang* has been eliminated, a relatively rapid expansion may be expected as households, once again, ramp up their currently restrained spending on consumer goods.

Indications are cautiously positive that a full recovery from the *Great Recession*, and the associated *debt overhang*, may be achieved. The Schiller Index, as depicted in Exhibit 3, above, has shown improvement in housing values between 2000 and 2015, and the employment to population ratio has stabilized, albeit at a lower level than historically observed. Despite lower employment numbers; moderating healthcare expenditures; and, decreased capital spending, the healthcare industry is starting to rebound in the post-recession period. Hospitals reported a slight

42 "Behind the Numbers: Financial and economic trends impacting our members," Premier, Inc., Economic Outlook (Fall 2013), p. 60-65.

43 "Collective Risk Management in a Flight to Quality Episode," By Ricardo J. Caballero and Arvind Krishnamurthy, *Journal of Finance*, Vol. 63, Issue 5 (2008), p. 2195-96.

recovery in 2012 net revenues. Total net hospital revenue in 2012, totaled \$821.3 billion, an eight percent increase from 2011 revenues of \$755.3 billion and an 11 percent increase from 2010 revenues of \$730.9 billion.⁴⁴ The number of hospitals in the U.S. also increased, from 5,010 hospitals in 2008⁴⁵ to 5,686 hospitals in 2014.⁴⁶ However, this number is still lower than the 2008 total of hospitals. These trends indicate that the healthcare industry may be starting to recover from the effects of the *Great Recession*. However, healthcare enterprises that anticipate improved access to capital in the future may be disappointed by the sluggish pace of this recovery and the extended period of tight capital lending policies.

Given the conclusions drawn above, the limited access to capital experienced by healthcare enterprises during the recent post-recession period will likely continue until the U.S. approximates a normally functioning economy. In some segments of the healthcare industry, risk averse investors, both equity and debt, will demand greater recompense to offset the additional risk undertaken by investment in the healthcare industry in light of: (1) the uncertainty surrounding healthcare reform; (2) the economy's post-recession stagnation; and, (3) the availability of funding for healthcare services. Increased capital expenses may restrict the number of capital investment projects (including ACOs) that may be considered financially feasible. Any analysis of an ACO's potential financial return should be tempered by a consideration of macroeconomic trends and an understanding of the impacts of seemingly unrelated economic events that may be transmitted to the healthcare industry through interconnected financial capital markets. The success or failure of many ACO projects may rely upon the ability of a healthcare organization's management to appropriately assess and mitigate these risks.

III.B *Healthcare Financing Issues*

The history of narrow profit margins and high costs has often made traditional lenders reluctant to enter the arena of healthcare financing. This reticence is particularly concerning because hospitals and other healthcare enterprises are more reliant on credit than most industries. Capital expenditures play an increasingly important role in the sustainability of healthcare systems, as both facilities and equipment are necessary for the provision of increasingly capital-intensive, technologically driven medical care to a sufficient number of patients to develop and maintain a viable ACO. The unique financial needs of healthcare organizations require lenders that understand the intricacies of healthcare capital expenditures. Financial institutions comprised of former healthcare industry managers who understand a healthcare organization's functions and needs are integral to a healthcare enterprise in choosing a financing partner. In addition to

44 "AHA Hospital Statistics: A Comprehensive Reference for Analysis and Comparison of Hospital Trends," 2014 Edition, American Hospital Association, (2014), p. 13; "Hospitals on the rebound, show stronger operating margins," By Beth Kutscher, Modern Healthcare (Jan. 3, 2014), <http://www.modernhealthcare.com/article/20140103/NEWS/301039973/hospitals-on-the-rebound-show-stronger-operating-margins>.

45 "Report on the Capital Crisis: Impact on Hospitals," American Hospital Association (2009), p. 12.

46 "Fast Facts on US Hospitals," AHA Resource Center, American Hospital Association, <http://www.aha.org/research/rc/stat-studies/fast-facts1.shtml> (Accessed 3/18/15), p. 1.

capital, these lenders may also provide management capital and impetus toward enhancing efficiency and cost cutting initiatives for healthcare borrowers.⁴⁷

IV. OVERVIEW OF CAPITAL CONCEPTS

Many healthcare enterprises currently seeking ACO status are large, integrated health systems, which are better-equipped to handle the financial risk associated with implementation and operation of ACOs, and where the cost of technology, if not already in place, is likely to be the most substantial capital requirement in the development of an ACO.⁴⁸ An *outcome-centered* payment system requires the development of a sustainable financial plan. It will entail a complicated, in-depth analysis of the challenges of managing capital and operating costs, as well as a realistic assessment of the opportunity for economic benefit resulting from investment in an ACO. These considerations can serve as the foundation in persuading investors of the potential financial benefits of an ACO and allow for the accumulation of the capital necessary to establish and develop an ACO.

IV.A Capital Funding Sources for ACOs

Narrow profit margins and high costs can make traditional lenders reluctant to finance *emerging healthcare organizations* (EHOs), so organizations developing an ACO should be willing to explore a wider array of options than in the past, including but not limited to:

- (1) Venture capital investments;
- (2) Private equity investments;
- (3) Hedge funds; and,
- (4) Partnerships with hospitals, insurers or pharmacies.

Large, integrated health systems may be more willing to form an ACO since they are better equipped to handle that risk, have established technology, and have greater access to capital, resources, providers and management staff. Hospitals, therefore, continue to be a primary source of funding for ACOs.⁴⁹ Progress for hospital involvement in ACOs has been slower than expected, with just under 33 percent involved with an ACO in 2014, down from an expected 52 percent involvement by the end of 2013.⁵⁰ This trend is anticipated to improve, as evidenced by an increase in hospital involvement of 15 percent between Fall 2013 and Spring 2014.⁵¹

47 "Looking Outside: Using External Capital Sources to Overcome Budget Constraints," y Dan Morse, GE Healthcare Financial Services, <http://www.gehealthcarefinance.com/includes/OurSolutions/montgomery.pdf> (Accessed 1/5/12).

48 "Accountable Care Organizations: 10 Things You Need To Know About Accountable Care," By Eleanor Burton and Virginia Traweek, Institute for Health Technology Transformation (2011), p. 25-26.

49 "Accountable Care Organizations: Value Metrics and Capital Formation," By Robert James Cimasi, MHA, ASA, MCBA, FRICS, CVA, CM&AA, Productivity Press: Boca Raton, FL (2013), p. 130.

50 "The Rise of Accountable Care" Premier, Inc., Quality Outlook Summer 2014, (Summer 2014), p. 35.

51 "Accountable Care Organizations Now Serve Up To 17% Of Americans," Oliver Wyman Press Release, April 21, 2014, <http://www.oliverwyman.com/who-we-are/press-releases/2014/accountable-care-organizations-now-serve-up-to-17--of-americans.html> (Accessed 8.4.14); "The Rise of Accountable Care" Premier, Inc., Quality Outlook Summer 2014, (Summer 2014), p. 35-44.

For healthcare organizations too small to access traditional funding sources, venture capital presents a unique funding opportunity. In exchange for shares in the company, investors can provide the capital needed to implement and/or develop an ACO. However, accessing venture capital may be difficult, because ACOs have not yet been proven as a financially viable investment, even at the threshold level of venture capital risk expectations. This may be due in part to:

- (1) The evolution from a volume-driven to a value-based reimbursement system;
- (2) Concern regarding potential implementation delays of various ACA provisions; and,
- (3) The uncertain probability that ACOs will generate revenue, or even break even, in the first year of operation.⁵²

According to The Physicians Foundation's survey of American physicians, only 13 percent of physicians believe ACOs will enhance quality and reduce costs.⁵³ Despite this lack of optimism among physicians regarding ACO investments, the recent increase of private equity investments in the healthcare industry seems to indicate that venture capitalists may be more confident in the financial potential that ACOs possess than physicians. As of May 2014, there has been a general increase in ACO sponsorship, with data reported by Leavitt Partners indicating 329 ACOs sponsored by government contracts, 210 ACOs with commercial contracts and 74 ACOs with both government and commercial contracts, of the 626 ACOs initially tracked.⁵⁴ This compares to a similar survey by Leavitt Partners in 2012 which reported 118 ACOs sponsored by hospitals, 70 by physicians, 29 by insurers and four by community-based organizations.⁵⁵

Although venture capital financing has decreased in recent years, peaking at \$10 billion in 2007, and decreasing to \$7 billion in 2013,⁵⁶ the amount of venture capital investments in the overall healthcare industry totaled \$286 million in 2013 (down from \$ 333 million in 2012).⁵⁷ Fairview Capital, a leading private equity investment management firm, explained that, "*this drop is not simply a consequence of the 2008 financial crisis, but represents a change in investor appetite for the sector, as healthcare's share of total venture capital financing fell from 31% to 24% between 2007 and 2013.*"⁵⁸ There may be hope on the horizon for venture capital investments in the healthcare industry, as indicated in the overall U.S. economy in the investment of \$13.0

52 "Global Healthcare Private Equity Report 2013," Bain & Company (2013), p. 6.

53 "2014 Survey of America's Physicians" By the Physicians Foundation, September 2014, http://www.physiciansfoundation.org/uploads/default/2014_Physicians_Foundation_Biennial_Physician_Survey_Report.pdf (Accessed 5/5/2015), p. 9.

54 "Growth and Dispersion of Accountable Care Organizations: June 2014, Update" By Matthew Petersen, Paul Gardner, Tianna Tu and David Muhlestein, Leavitt Partners, June 2014, <http://leavittpartners.com/wp-content/uploads/2014/06/Growth-and-Dispersion-of-Accountable-Care-Organizations-June2014.pdf> (Accessed 9/12/14).

55 "For ACOs, IT Startup Costs Top \$1 Million," By Ken Terry, InformationWeek: Healthcare: Clinical Information Systems, Sept. 27, 2012, [http://www.informationweek.com/healthcare/clinical-information-systems/for-acos-it-startup-costs-top-\\$1-million/d/d-id/1106546?](http://www.informationweek.com/healthcare/clinical-information-systems/for-acos-it-startup-costs-top-$1-million/d/d-id/1106546?) (Accessed 8/25/14); "Growth and Dispersion of Accountable Care Organizations: June 2012 Update," By David Muhlestein, Andrew Croshaw, Tom Merrill and Christian Pena, Leavitt Partners, <http://leavittpartners.com/wp-content/uploads/2013/03/Growth-and-Dispersion-of-ACOs-June-2012-Update-Download.pdf> (Accessed 8/25/14); "Start-up ACO's Anticipate \$500m First Year Spend For Essential Health Technologies, says Black Book Market Research Survey," PRWeb, Sept. 24, 2012, <http://www.prweb.com/releases/2012/9/prweb9908320.htm> (Accessed 8/25/14).

56 "View: Update on Healthcare Venture Capital," Fairview Capital, <http://fairviewcapital.com/downloads/Update-On-Healthcare-Venture-Capital.pdf> (Accessed 9/2/14).

57 "PricewaterhouseCoopers, MoneyTree Report," <https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=historical> (Accessed 2/12/14).

58 "View: Update on Healthcare Venture Capital," Fairview Capital, <http://fairviewcapital.com/downloads/Update-On-Healthcare-Venture-Capital.pdf> (Accessed 9/2/14).

billion by venture capitalists in the second quarter of 2014, the highest level of overall investment since the fourth quarter of 2000.⁵⁹

Venture capitalists have made substantial investments not only in ACOs, but also in those companies that provide support services to ACOs. For example, in 2011, the venture capital firm Kleiner Perkins Caufield & Byers, an early investor in brand names such as Amazon.com; AOL; and, Google, invested \$61 million in the St. Louis-based Essence Group Holdings Corporation, a company that assists healthcare organizations in forming ACOs.⁶⁰ Another prominent example of venture capital financing is the formation of Aledade, a company developed to help independent primary care physicians form ACOs. Dr. Farzad Mostashari, the former National Coordinator for Health Information Technology, started Aledade with funding from the venture capital firm Venrock, in the amount of \$4.5 million.⁶¹ Aledade will provide financial support to ACOs upfront to cover the expenses of hiring the right people, getting agreements, licenses, legal work, executive directors, practice transformations, analytics and other startup costs, estimated to total between \$1 and 2 million.⁶² Aledade will reap a return once the ACO generates savings – the company will receive 40 percent of the savings, while the participating providers will retain 60 percent.⁶³ Aledade is expected to help form ACOs in Delaware, Maryland, New York, and Arkansas in 2015.⁶⁴

In addition to venture capital investments in the healthcare industry, private equity investments in healthcare are becoming a recognized investment strategy for healthcare organizations. According to Bain & Company's "*Global Healthcare Private Equity Report 2014*," approximately seven percent of all buyout deals in 2013 were made in the general healthcare industry.⁶⁵ Private equity investors are seemingly more interested in investing in the trends spurred by healthcare reform, such as evolving healthcare delivery models (e.g., ACOs).⁶⁶ These investors are pursuing both direct investments in ACOs, through financing independent practice associations and hospitals, and indirect investments, through investing in health information technology (HIT) and care management.⁶⁷ Some examples of recent indirect ACO investments include Bain Capital Ventures, which invested \$77.5 million in MedHOK, a healthcare software

59 "Venture Capital Investing Reaches Highest Level Since Q4 2000 with \$13.0 Billion Invested During Q2 2014, According to The Moneytree Report, Press Release, PricewaterhouseCoopers (July 18, 2014), <http://www.pwc.com/us/en/press-releases/2014/venture-capital-investing-reaches-highest-level.jhtml> (Accessed 9/18/14).

60 "Leading Venture Capitalists Place a Bet on ACOs," By Christopher Weaver, Kaiser Health News, Jul. 20, 2011, <http://capsules.kaiserhealthnews.org/index.php/2011/07/leading-venture-capitalists-place-a-bet-on-acos/>.

61 "Former ONC Chief Mostashari Heads ACO Startup," By Darius Tahir, Modern Healthcare: Healthcare Business News, June 18, 2014, <http://www.modernhealthcare.com/article/20140618/NEWS/306189954> (Accessed 8/25/14).

62 "Former ONC Chief Mostashari Heads ACO Startup," By Darius Tahir, Modern Healthcare: Healthcare Business News, June 18, 2014, <http://www.modernhealthcare.com/article/20140618/NEWS/306189954> (Accessed 8/25/14).

63 "Former ONC Chief Mostashari Heads ACO Startup," By Darius Tahir, Modern Healthcare: Healthcare Business News, June 18, 2014, <http://www.modernhealthcare.com/article/20140618/NEWS/306189954> (Accessed 8/25/14).

64 "Former ONC Chief Mostashari Heads ACO Startup," By Darius Tahir, Modern Healthcare: Healthcare Business News, June 18, 2014, <http://www.modernhealthcare.com/article/20140618/NEWS/306189954> (Accessed 8/25/14).

65 "Global Healthcare Private Equity Report 2014," Bain and Company, 2014, http://www.bain.com/Images/BAIN_REPORT_Global_healthcare_private_equity_report_2014.pdf, 1 (Accessed 9/18/14).

66 "Global Healthcare Private Equity Report 2014," Bain and Company, 2014, http://www.bain.com/Images/BAIN_REPORT_Global_healthcare_private_equity_report_2014.pdf, 1 (Accessed 9/18/14).

67 "Global Healthcare Private Equity Report 2014," Bain and Company, 2014, http://www.bain.com/Images/BAIN_REPORT_Global_healthcare_private_equity_report_2014.pdf, 1 (Accessed 9/18/14).

provider that markets clinically integrated technology to ACOs,⁶⁸ Kaiser Permanente, which invested \$8 million in Health Catalyst, a healthcare data warehousing company that aggregates data utilized by ACOs,⁶⁹ and Kyruus, Inc., a company which offers products that uses data analytics to help improve performance and efficiency among physicians by evaluating which doctors are most efficient at specific procedures, and using that data to improve healthcare outcomes and lower costs.⁷⁰ These types of services can be complementary to ACOs and help organizations meet their quality objectives.

Private equity may be important when exploring nontraditional methods to expand the patient base of a healthcare system. This was evidenced recently when Centerre Healthcare, a company which is backed by private equity, and partners with hospitals to establish rehabilitation units, collaborated with two Dallas health systems, *Texas Health Resources* and *Methodist Health System*, to build an inpatient rehabilitation hospital.⁷¹ By utilizing the funds provided by Centerre Healthcare, the health systems are able to increase their revenue streams through an expanded patient base without an upfront investment.⁷²

Another recent private equity investment was Great Point Partners, a private equity firm focused on healthcare, which significantly invested in the acquisition of MZI Healthcare by Orange Health Solutions.⁷³ MZI and Orange Health Solutions are both health systems that aid hospitals in establishing ACOs.⁷⁴ Also funded through private equity was Steward Health System in California, which was sold for \$895 million to Cerberus Capital Management in 2010.⁷⁵ Steward was converted to for-profit tax status, and in 2011 was accepted into the Pioneer ACO program.⁷⁶ As noted by Bloomberg Businessweek in August 2013, *“There have been few private equity buyouts of hospital companies. Hospitals are heavily regulated. Those that accept Medicare must provide emergency services to patients regardless of their ability to pay. That alone would make it something of a feat for Cerberus to turn a profit.”*⁷⁷

68 “Bain Capital Ventures, Spectrum Equity invest in MedHOK,” By Nicola Leske, Reuters, Jan. 8, 2014, <http://www.reuters.com/article/2014/01/08/us-baincapital-spectrumequity-medhok-idUSBREA070EJ20140108>; Accountable Care Organizations, MedHOK, <http://medhok.com/who-we-serve/accountable-care-organizations/> (Accessed 1/30/14).

69 “Kaiser Permanente Ventures and CHV Capital Back Health Catalyst,” Press Release, Reuters, Feb. 28, 2013, <http://www.pehub.com/2013/02/kaiser-permanente-ventures-chv-capital-back-health-catalyst/>; “The Health Catalyst Story,” Health Catalyst <http://www.healthcatalyst.com/company/> (Accessed 2/2/14).

70 “Kyruus raises \$11M to advance 'big data' health IT,” By Julie M. Donnelly, Boston Business Journal: Startups & Venture Capital, Jan. 2, 2013, <http://www.bizjournals.com/boston/blog/startups/2013/01/kyruus-raises-11m-to-advance-big-data.html> (Accessed 9/15/14).

71 “Texas Health resources, Methodist team with Centerre for rehab hospital,” Beth Kutscher, Modern Healthcare: Healthcare Business News, January 17, 2014, <http://www.modernhealthcare.com/article/20140117/NEWS/301179970> (Accessed 9/14/14).

72 “Texas Health resources, Methodist team with Centerre for rehab hospital,” Beth Kutscher, Modern Healthcare: Healthcare Business News, January 17, 2014, <http://www.modernhealthcare.com/article/20140117/NEWS/301179970> (Accessed 9/14/14).

73 “Great Point Partners, Great Point Partners Makes Investment in Orange Health Solutions to Finance the Acquisition of MZI HealthCare,” Press Release, April 15, 2014, http://www.gppfunds.com/news/news_archive/2014/release_20140415.html (Accessed 9/18/14).

74 “Great Point Partners, Great Point Partners Makes Investment in Orange Health Solutions to Finance the Acquisition of MZI HealthCare,” Press Release, April 15, 2014, http://www.gppfunds.com/news/news_archive/2014/release_20140415.html (Accessed 9/18/14).

75 “Steward Health System Leverages Analytics to Turn Risk into Results,” Optum, 2014, http://www.optum.com/content/dam/optum/resources/caseStudies/OPT-13-021_Steward_success_story.pdf (Accessed 8/26/14).

76 “The Economic Impact of Steward Health Care System on the Massachusetts Economy: 2010-2012,” HealthBusiness Group, p. 4; “Steward Health System Leverages Analytics to Turn Risk into Results,” Optum, 2014, http://www.optum.com/content/dam/optum/resources/caseStudies/OPT-13-021_Steward_success_story.pdf (Accessed 8/26/14).

77 “Private Equity's Hospitals: A Business Model for the Obamacare Era?” By Devin Leonard, Bloomberg Businessweek, August 29, 2013, <http://www.businessweek.com/printer/articles/147908-private-equitys-hospitals-a-business-model-for-the-obamacare-era> (Accessed 8/26/14).

In addition to the use of private equity, Cerberus Capital Management also utilized hedge funds to purchase Steward Health System. However, hedge funds are not typically a primary funding source, because most for-profit health systems are wary about ACO investments.⁷⁸ However, Tenet Healthcare Corporation (Tenet) has utilized hedge funds to finance numerous ACO initiatives as it commences its transition to value-based healthcare.⁷⁹ For example, in 2012, Tenet established a commercial ACO,⁸⁰ and, in 2013, purchased Vanguard Health Systems, a health system that includes the *Detroit Medical Center*, a pioneer ACO.⁸¹ Additionally, in 2013, Tenet collaborated with Blue Cross and Blue Shield of Texas to create a statewide ACO.⁸² The key individual driving Tenet's utilization of hedge funds is Larry Robbins of Glenview Capital Management. Robbins, a hedge fund manager, holds a major stake in a number of healthcare companies that are positioned to see change which is attributable to the ACA, such as: Lifepoint Hospitals; Walgreens; Cigna; and, Humana.⁸³

Smaller healthcare enterprises that wish to form ACOs, but have insufficient operational cash flow to fund initial capital needs, and/or an inadequate number of Medicare beneficiaries (which may hinder a healthcare enterprise from meeting Medicare ACO requirements), may need to be more creative in seeking out partnerships and capital sources. These problems are particularly prevalent in rural areas, where ACOs have been slow to form.⁸⁴ Regardless, small healthcare organizations in rural areas are establishing federal ACOs, by: (1) aligning several community health systems to amass the required number of Medicare beneficiaries to qualify as an ACO under the *Medicare Shared Savings Program* (MSSP); and, (2) centralizing programs (e.g., data warehouses) among participants to defray initial startup costs.⁸⁵ One such initiative is the *National Rural ACO* (NRACO), which consists of *Rural* and *Critical Access Hospitals*, *Federally Qualified Health Centers* (FQHC), *Rural Health Clinics*, and independent physician practices across nine rural communities in the states of California, Indiana, and Michigan.⁸⁶

78 "No ROI in ACO," By Beth Kutscher, Modern Healthcare: Healthcare Business News, April 21, 2012, <http://www.modernhealthcare.com/article/20120421/MAGAZINE/304219922> (Accessed 9/22/14).

79 "Tenet a rare for-profit system experimenting with ACO: Some other for-profits have been wary Reuters says," The Advisory Board Company, Oct. 7, 2013, <http://www.advisory.com/daily-briefing/2013/10/07/tenet-bucks-trend-launches-aco> (last visited Sept. 2, 2014).

80 The Advisory Board Company, Tenet a rare for-profit system experimenting with ACO: Some other for-profits have been wary Reuters says, October 7, 2013, <http://www.advisory.com/daily-briefing/2013/10/07/tenet-bucks-trend-launches-aco> (Accessed 9/2/14); "Tenet-Cigna deal lays groundwork for ACOs," By Beth Kutscher, Modern Healthcare: Healthcare Business News, July 24, 2012, <http://www.modernhealthcare.com/article/20120724/NEWS/307249986> (Accessed 9/2/14).

81 "Betting on Change," Beth Kutscher, Modern Healthcare: Healthcare Business News, June 29, 2013, <http://www.modernhealthcare.com/article/20130629/MAGAZINE/306299991> (Accessed 9/2/14).

82 "BlueCross BlueShield of Texas, Blue Cross and Blue Shield of Texas and Tenet Healthcare Corporation Collaborate on Statewide ACO to Improve Quality and Efficiency of Care," Press Release, Nov. 12, 2013, http://www.bcbstx.com/company_info/newsroom/press_releases/news?lid=hnu8lv9c (Accessed 9/2/14).

83 "Larry Robbins' Obamacare Bet Makes Him Hedge Fund Manager of the Year," By Nathan Vardi, Forbes: Wall Street, Nov. 11, 2013, <http://www.forbes.com/sites/nathanvardi/2013/11/12/larry-robbins-obamacare-bet-makes-him-hedge-fund-manager-of-the-year/> (Accessed 9/2/14).

84 "Accountable Care Organizations in the United States: Market and Demographic Factors Associated with Formation," By Valerie A. Lewis, et al., Health Services Research Vol. 48, Issue 6 (2013), p. 1842.

85 "Nine rural communities in Indiana, Michigan and California collaborate to create the National Rural Accountable Care Organization," Press Release, PR Newswire, Jan. 27, 2014, <http://www.modernhealthcare.com/article/20140128/NEWS/301289912/nine-rural-providers-test-out-aco-initiative>.

86 "Nine rural communities in Indiana, Michigan and California collaborate to create the National Rural Accountable Care Organization," Press Release, PR Newswire, Jan. 27, 2014, <http://www.modernhealthcare.com/article/20140128/NEWS/301289912/nine-rural-providers-test-out-aco-initiative>.

None of these associated organizations could have developed a federal ACO without participation in the NRACO.⁸⁷

In addition to joining forces with other similarly situated health systems and practices, rural healthcare enterprises with insufficient capital for ACO development may apply for government aid to assuage the financial string of the ACO's initial financial/capital burden by participating in MSSP's *Medicare Advance Payment Initiative*. This initiative currently funds 35 ACOs that generate less than \$80 million in yearly revenue through three distinct types of payments,⁸⁸ of which the first two payments, listed below, are delivered to the healthcare organization in the first month of operation:

- (1) An upfront, fixed payment of \$250,000;⁸⁹
- (2) An upfront variable payment of \$36 per “*preliminary, prospectively assigned*” beneficiary,⁹⁰ and,
- (3) A continuous, once-a-month payment of eight dollars per “*preliminary, prospectively assigned*” beneficiary.⁹¹

Other alternative sources of funding can come from insurance companies, whom have been involved in the formation of both federal and commercial ACOs, as well as the provision of financial support in the form of grants. One such example is Blue Shield of California. For fiscal years 2010 and 2011, the insurance company pledged nearly \$20 million in grant funding to aid 18 California hospitals, health systems, clinics and physician groups in participating more effectively in ACOs.⁹² These grants are a part of the insurance company's two percent pledge, which aims to limit Blue Shield's net income to two percent of revenue, and return the rest of its net income to insurance beneficiaries and the community.⁹³ In addition to Blue Shield's financial support of ACOs, UnitedHealthcare has formed partnerships with health systems to develop ACOs.⁹⁴ The insurance company partnered with the *Atlantic Accountable Care Organization* in New Jersey to further UnitedHealthcare's emphasis on “*rewarding care providers for better care, better health and lower costs.*”⁹⁵ UnitedHealthcare is expected to grow its ACO contracts

87 “Nine rural communities in Indiana, Michigan and California collaborate to create the National Rural Accountable Care Organization,” Press Release, PR Newswire, Jan. 27, 2014, <http://www.modernhealthcare.com/article/20140128/NEWS/301289912/nine-rural-providers-test-out-aco-initiative>.

88 “Advance Payment Solicitation,” Centers for Medicare & Medicaid Innovation, <http://innovation.cms.gov/Files/x/Advance-Payment-Model-ACO-solicitation-doc.pdf> (Accessed 1/15/14).

89 “Advance Payment Solicitation,” Centers for Medicare & Medicaid Innovation, <http://innovation.cms.gov/Files/x/Advance-Payment-Model-ACO-solicitation-doc.pdf> (Accessed 1/15/14).

90 “Advance Payment Solicitation,” Centers for Medicare & Medicaid Innovation, <http://innovation.cms.gov/Files/x/Advance-Payment-Model-ACO-solicitation-doc.pdf> (Accessed 1/15/14).

91 “Advance Payment Solicitation,” Centers for Medicare & Medicaid Innovation, <http://innovation.cms.gov/Files/x/Advance-Payment-Model-ACO-solicitation-doc.pdf> (Accessed 1/15/14).

92 “Blue Shield of California Invests \$20 Million to help Providers Develop Accountable Care Organizations,” By Steve Shivinsky, Blue Shield of California, Oct. 17, 2011, <https://www.blueshieldca.com/bzca/about-blue-shield/newsroom/aco-development-grants.sp> (Accessed 8/26/14).

93 “Blue Shield of California Invests \$20 Million to help Providers Develop Accountable Care Organizations,” By Steve Shivinsky, Blue Shield of California, Oct. 17, 2011, <https://www.blueshieldca.com/bzca/about-blue-shield/newsroom/aco-development-grants.sp> (Accessed 8/26/14).

94 “FAQs on ACOs: Accountable Care Organizations, Explained,” By Jenny Gold, Kaiser Health News, April 16, 2014, <http://www.kaiserhealthnews.org/stories/2011/january/13/aco-accountable-care-organization-faq.aspx> (Accessed 9/15/14).

95 “Atlantic ACO, UnitedHealthcare Collaborate to Improve Health Care Quality, Reduce Costs in New Jersey,” UnitedHealthcare, April 7, 2014, http://www.uhc.com/news_room/2014_news_release_archive/atlantic_aco_and_unitedhealthcare_collaborate.htm (Accessed 8/25/14).

to \$65 billion by 2018, and currently has more than \$27 billion of its annual reimbursements tied to ACO programs.⁹⁶

Pharmacies are also beginning to enter the ACO market, with Walgreens taking the lead and forming ACOs in New Jersey, Florida and Texas.⁹⁷ The ACO Final Rule⁹⁸ does not specifically “*list pharmacists as eligible professionals to form ACOs or be eligible for shared saving,*” but pharmacists are still allowed to participate in ACOs.⁹⁹ In regards to the financial benefit to Walgreens in forming an ACO, a spokesperson for the company said, “*Walgreens as a whole will be participating in the savings, but we cannot provide more information about potential future financial elements of the ACOs at this time.*”¹⁰⁰

Changing market conditions and evolving reimbursement methods in the healthcare industry have increased the importance of seeking out creative capital financing options to supplement a healthcare enterprise’s *capital structure*. Many providers have begun looking beyond traditional sources of capital, to alternative forms of long-term financing, e.g., asset specific financing. As the economy continues to recover in the post-recession period, the availability of capital sources for emerging ACOs may continue to increase. However, these healthcare organizations should consider exploring a wider array of options than in the past, and efficiently and accurately assess the risk associated with each option.¹⁰¹

IV.B *Capital Investment For ACO Development*

In order to develop and maintain requisite levels of capital to overcome the challenges associated with the current economic environment in the post-recession period, developing ACOs will have to address capital considerations in unique ways, dependent in part, on their size and status. Further, the *capital structure* of ACOs will differ between for-profit and non-profit enterprises due to strict regulatory guidelines limiting non-profit organizations from participating in *publicly traded equity markets*. A viable financial model should be created through consideration of available financing options, including: (1) debt-financing; (2) equity-financing; and, (3) internally generated capital. The lingering effects of the *Great Recession* on the healthcare industry, coupled with low profits and high costs, has diminished much of the capital available to healthcare organizations. These same factors may present barriers to capital acquisition for successful ACO development.

96 “Atlantic ACO, UnitedHealthcare Collaborate to Improve Health Care Quality, Reduce Costs in New Jersey,” UnitedHealthcare, April 7, 2014, http://www.uhc.com/news_room/2014_news_release_archive/atlantic_aco_and_unitedhealthcare_collaborate.htm (Accessed 8/25/14).

97 “Walgreens forms three new ACOs,” American Pharmacists Association, January 22, 2013, <http://www.pharmacist.com/walgreens-forms-three-new-acos> (Accessed 8/25/14).

98 “The Final Rule for the Medicare Shared Savings Program,” Commonwealth Fund, 2011, <http://www.commonwealthfund.org/~media/Files/Publications/Other/2011/ZezzasummaryfinalruleMedicaresharedsavingsv2%202.pdf>, (Accessed 8/25/14).

99 “Walgreens forms three new ACOs,” American Pharmacists Association, January 22, 2013, <http://www.pharmacist.com/walgreens-forms-three-new-acos> (Accessed 8/25/14).

100 “Walgreens forms three new ACOs,” American Pharmacists Association, January 22, 2013, <http://www.pharmacist.com/walgreens-forms-three-new-acos> (Accessed 8/25/14).

101 “Hospital Financing Options for the Future,” Healthcare Financial Management Association, Educational Report (Aug. 2012), p. 2, 8.

A 2013 “*National ACO Survey*,” which surveyed 35 of the 114 ACOs that began participating in the MSSP in April and July 2012,¹⁰² found the average start-up expenses for ACO creation to be \$2 million, although these initial investments were wide-ranging, from \$300,000 to \$6.7 million.¹⁰³ This number is strikingly close to CMS’s original ACO start-up costs projection in its 2011 Proposed Rule of \$1.7 million,¹⁰⁴ and much less than the American Hospital Association’s (AHA) 2011 estimate of \$5.3 million (for a 200 bed hospital) to \$12 million (for a 1,200 bed hospital system).¹⁰⁵ These capital investments, described below, include: (1) network development and management; (2) care coordination, quality improvement, and utilization management; (3) clinical information systems; and, (4) data analytics.

IV.B.1 Network Development and Management

A portion of an entity’s startup costs may be dedicated to *network development* and *management* for ACO creation. Capital for *network development* will likely be focused on fostering relationships between ACO participants and merging their various, divergent goals.¹⁰⁶ Additional capital requirements may include coordination with associated ACO participants in order to provide the full spectrum of healthcare throughout a patient’s episode of care.

According to the AHA’s 2011 case study, entitled, “*The Work Ahead*,” *network development* and *management* includes the provision of:

- (1) Management and staff;
- (2) Legal and consulting support;
- (3) Contracting proficiency;
- (4) Management resources;
- (5) Primary care professionals;
- (6) Financial and management information support systems; and,
- (7) Compensation to physician executives.¹⁰⁷

The AHA calculated that these start-up costs for *network development* and *management* would likely total over \$2.2 million for a *small ACO* (e.g., one hospital, 200 beds, 80 primary care physicians, and 150 specialists), and over \$3 million for a *large ACO* (e.g., 5 hospitals, 1,200 beds, 250 primary care physicians, and 500 specialists).¹⁰⁸

102 “Program News and Announcements,” Centers for Medicare & Medicaid Services, <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/News.html> (Accessed 2/28/14).

103 “National ACO Survey: Conducted November 2013,” National Association of ACOs (2014), p. 2.

104 “Medicare Shared Savings Program: Accountable Care Organizations,” Federal Register, Vol.76, No. 19528 (Apr. 7, 2011), p. 19599-19600.

105 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

106 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

107 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

108 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 2.

IV.B.2 Care Coordination, Quality Improvement, and Utilization Management

ACOs may require capital contributions in order to coordinate care, improve quality, and manage healthcare utilization rates among patients through programs such as: (1) disease registries; (2) hospitalists; (3) care coordination and follow-up post-discharge; and, (4) attaining designation as a patient-centered medical home. These programs may be developed internally or through an outside management services organization.¹⁰⁹

Improved quality of care generally corresponds with more participation and collaboration between providers and their beneficiaries. This improved collaboration generally increases the capital requirements for existing health systems not designed for such an extensive collaboration. For example, in AHA's 2011 case study, "*The Work Ahead*," management programs for chronic conditions and medications were utilized to deliver improved quality care to patients and beneficiaries. The capital required for human resources, hardware, software, and infrastructure to run and support such programs may be substantial, as the vast majority of healthcare organizations are not designed for long-term involved disease and population health management.¹¹⁰ "*The Work Ahead*" found start-up costs for care coordination, quality improvement, and utilization management to total approximately \$450,000 for a *small ACO*, and approximately \$760,000 for a *large ACO*.¹¹¹

IV.B.3 Clinical Information Systems

Clinical information systems include programs such as electronic health records (EHR); EHR interoperability; and, connecting EHRs to health information exchanges (HIE).¹¹² Capital requirements for these systems will likely be significant, as EHR implementation is expected to account for a vast majority of this cost. CMS originally required EHR utilization in the Proposed Rule for the MSSP, but loosened the constraint in the Final Rule. The Proposed Rule indicated that half of the "*ACO's primary care physicians*" must be "*meaningful EHR users*" to "*continue participation in the Shared Savings Program*."¹¹³ However, the Final Rule relaxed the requirement, classifying EHR use as only one of the 33 quality measures used to calculate potential shared savings.¹¹⁴ Despite this more lenient requirement, it is still likely that considerable initial capital allocation for EHR implementation will be required for the development of a clinical information system designed to efficiently and effectively meet the aims of the ACO network. Although not required, CMS noted that ACOs that have an enriched

109 "Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery," By Sharon Silow-Carroll & Jennifer N. Edwards, The Commonwealth Fund (2013), p. 10.

110 "The Work Ahead: Activities and Costs to Develop an Accountable Care Organization," American Hospital Association (2011), p. 7.

111 "The Work Ahead: Activities and Costs to Develop an Accountable Care Organization," American Hospital Association (2011), p. 2.

112 American Hospital Association, *The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*, 2 (2011).

113 "Medicare Shared Savings Program: Accountable Care Organizations," Federal Register, Vol. 76, Issue 19528 (Apr. 7, 2011), p. 19599-19600.

114 "Medicare Shared Savings Program: Accountable Care Organizations," Federal Register, Vol. 76, Issue 19528 (Apr. 7, 2011), p. 19599-19600, 67902.

understanding and usage of HIT and EHR systems “will likely find it easier to be successful under the Shared Savings Program.”¹¹⁵ Healthcare enterprises have been further motivated by the federal government to implement EHR systems through the *Health Information Technology for Economic and Clinical Health Act (HITECH)*, which requires Medicare providers to obtain “meaningful use” of EHR by the end of 2014 to avoid reimbursement penalties.¹¹⁶ The Act provides both financial incentives and technical support to overcome barriers that have previously kept healthcare providers from adopting some form of an EHR system.¹¹⁷

The estimated start-up costs for *clinical information systems*, according to the AHA’s 2011 case study, “*The Work Ahead*,” for *small ACOs* were \$2.35 million, and upwards of \$7.65 million for *large ACOs*.¹¹⁸ Despite the high cost, the investment in “*structural tools*,” such as EHR systems that connect a patient’s providers and serve as a foundation for improving the quality of care, also facilitate the collaboration needed to provide efficient, high quality healthcare.¹¹⁹

AHA found that the capital requirements for an EHR program, a large component (but only one component) of a *clinical information system*, ranged between \$2 million for a *small ACO* and \$7.05 million for a *large ACO* in the first year.¹²⁰ In contrast, the 2013 “*National ACO Survey*” of 35 MSSP ACOs, which serve 5,100 to 78,000 beneficiaries, found the average initial HIT capital requirement to total approximately \$850,000.¹²¹ The survey found that smaller ACOs (e.g., 5,000 to 10,000 beneficiaries) spent approximately \$500,000 in the first year of operation, while larger ACOs (e.g., 16,000 to 25,000 beneficiaries) spent over \$1.6 million on IT systems in the first year of operation.¹²²

IV.B.4 Data Analytics

CMS’s ACO quality measures require data collection and analysis for reporting an ACO’s progress on health outcomes and claims. In addition to capital for EHRs and other clinical information systems, it is likely the ACO will require capital to be allocated for separate data analytics systems designed to track and monitor necessary data regarding quality measures for reporting.¹²³ However, the costs associated with data analytics will be significantly less than those associated with EHR development. For example, one of the four private ACOs analyzed in the AHA’s 2011 case study, “*The Work Ahead*,” had developmental costs for data analysis software of \$40,000, while the annual operating costs were \$1,800 per physician (approximately

115 “Medicare Shared Savings Program: Accountable Care Organizations,” Federal Register, Vol. 76, Issue 19528 (Apr. 7, 2011), p. 67902.

116 “American Reinvestment and Recovery Act,” Pub. L. No. 111-5, 123 Stat. 115, 231.

117 “American Reinvestment and Recovery Act,” Pub. L. No. 111-5, 123 Stat. 115, 231.

118 “National ACO Survey: Conducted November 2013,” National Association of ACOs (2014), p. 4.

119 “Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery,” By Sharon Silow-Carroll & Jennifer N. Edwards, The Commonwealth Fund (2013), p. 16; “Team –Based Care at Mayo Clinic: A Model for ACOs,” By Leonard L. Berry & Dan Beckham, *Journal Healthcare Management* Volume 59 (2014), p. 9, 12.

120 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 8.

121 “National ACO Survey: Conducted November 2013,” National Association of ACOs (2014), p. 8.

122 “National ACO Survey: Conducted November 2013,” National Association of ACOs (2014), p. 4.

123 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 2.

\$100,000).¹²⁴ As these figures appear to demonstrate, the initial capital investment involved in ACOs may be high, but the annual operating costs of ACOs, in some areas, may potentially be even higher.

IV.C Expenses Related To Ongoing ACO Operation

In addition to the capital required for the initial ACO formation, there will also be costs associated with its ongoing operation. AHA's 2011 case study, *"The Work Ahead,"* anticipated ongoing costs to be approximately \$6.3 million a year for a *small ACO*,¹²⁵ and closer to \$14.1 million a year for a *large ACO*.¹²⁶ Mirroring the startup costs for ACO formation, operating costs for an ACO may include: (1) network development and management; (2) quality improvements; (3) utilization management; (4) clinical information systems; and, (5) data analytics.

IV.C.1 Network Development and Management

Network management for an ACO may include a range of infrastructures and services that must be maintained in order to keep the organization functional. To assure the growth of successful networks, ACOs must incur several expenses related to:

- "(1) providing management and staff;*
- (2) leveraging the health system's management resources;*
- (3) engaging legal and consulting support;*
- (4) developing financial and management information support systems;*
- (5) recruiting/acquiring primary care professionals;*
- (6) developing and managing relationships with specialists;*
- (7) developing and managing relationships with post-acute care networks;*
- (8) developing contracting capabilities; and,*
- (9) compensating physician leaders."*¹²⁷

Many ACOs are adding staff such as social workers, outreach coordinators, resource specialists, behavior specialists, coders, technical experts, psychiatrists, and nurses to aid in managing population health issues.¹²⁸ For example, Arizona Connected Care placed nurse managers in its clinics to help enroll chronically ill patients in health education or disease management

124 "Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery," By Sharon Silow-Carroll & Jennifer N. Edwards, The Commonwealth Fund (2013), p. 16; "Team -Based Care at Mayo Clinic: A Model for ACOs," By Leonard L. Berry & Dan Beckham, *Journal Healthcare Management* Volume 59 (2014), p. 10.

125 "Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery," By Sharon Silow-Carroll & Jennifer N. Edwards, The Commonwealth Fund (2013), p. 16; "Team -Based Care at Mayo Clinic: A Model for ACOs," By Leonard L. Berry & Dan Beckham, *Journal Healthcare Management* Volume 59 (2014), p. 10.

126 "The Work Ahead: Activities and Costs to Develop an Accountable Care Organization," American Hospital Association (2011), p. 1, 16.

127 "The Work Ahead: Activities and Costs to Develop an Accountable Care Organization," American Hospital Association (2011), p. 2.

128 Sharon Silow-Carroll & Jennifer N. Edwards, *Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery*, The Commonwealth Fund, 16 (2013).

programs.¹²⁹ Catholic Medical Partners, a non-profit independent practice association, began with a six-member management team, and ultimately expanded to 22 members (one staff member for every 41 physicians).¹³⁰ Initially, operational expenses for *management and staff development* will likely be small, and increase accordingly with the long-term sustainability plans and size of the ACO. The 2011 AHA case study, “*The Work Ahead*,” totaled the annual costs for *network development* and *management* at \$3.040 million for *small ACOs* and over \$8.71 million for *large ACOs*.¹³¹

IV.C.2 Care Coordination, Quality Improvement, and Utilization Management

Care coordination, quality improvement and utilization management are imperative for maintaining an ACO from a clinical perspective. In order to achieve ongoing success in these three aspects of ACO operations, an organization may incur expenses related to:

- “(1) *disease registries*;
- (2) *care coordination and discharge follow-up*;
- (3) *specialty-specific disease management*;
- (4) *hospitalists*;
- (5) *integration of inpatient and ambulatory approaches in service lines*;
- (6) *patient education and support*;
- (7) *medication management*; and,
- (8) *achieving designation as a patient-centered medical home*.”¹³²

According to the 2011 AHA case study, “*The Work Ahead*,” the ongoing costs for *care coordination, quality improvement and utilization management* for a *small ACO* were estimated to be \$1.5 million per year, while the total ongoing costs for a *large ACO* were approximately \$3.9 million per year.¹³³

IV.C.3 Clinical Information Systems

An ACO must also maintain clinical information systems in order to properly operate. These systems include: “(1) *Electronic health record[s] (EHR[s])*; (2) *intra-system EHR interoperability*; and, (3) *linking to a health information exchange (HIE)*.”¹³⁴ Without these IT tools, an ACO would not be able to coherently maintain all of the patient information that is constantly created and exchanged, or be able to keep up with the organization’s daily management needs.

129 Sharon Silow-Carroll & Jennifer N. Edwards, *Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery*, The Commonwealth Fund, 16 (2013).

130 “*The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*,” American Hospital Association (2011), p. 4.

131 “*The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*,” American Hospital Association (2011), p. 2.

132 “*The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*,” American Hospital Association (2011), p. 4.

133 “*The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*,” American Hospital Association (2011), p. 4.

134 “*The Work Ahead: Activities and Costs to Develop an Accountable Care Organization*,” American Hospital Association (2011), p. 4.

The 2011 AHA case study, “*The Work Ahead*,” expected ongoing expenditures for clinical information systems to be significant, with *small ACOs* estimated to spend \$1.5 million annually, and *large ACOs* estimated to spend \$7.65 million for these systems.¹³⁵ The largest portion of these expenditures were attributed to EHRs; *small ACOs* spent approximately \$1.2 million annually to maintain and upgrade their EHR systems, and *large ACOs* spent over \$7 million annually, to maintain and upgrade their EHR systems.¹³⁶

IV.C.4 Data Analytics

As mentioned above, in Section IV.B.4, *data analytics* is the term attributed to a healthcare entity’s non-clinical data management. An ACO’s utilization of technology to collect and analyze data will likely increase as healthcare enterprises seek to evaluate new forms of information to: (1) target potential cost savings; (2) track quality measures for reporting; and, (3)

manage population health. The activities associated with this category include: (1) analysis of care patterns; (2) quality reporting costs; and, (3) other activities and costs.¹³⁷ However, meaningful information from data analytics will likely not be available until after approximately four years of ACO operation.¹³⁸ The gap between the implementation of data analysis software and the production of meaningful information for managerial decision making will require ACOs to control their operational costs until the technology is able to produce valuable results. For example, Metro Health, a 200-bed hospital in Grand Rapids, Michigan, pays \$90,000 annually for a data analytic program called “*Crimson*,” which analyzes EHR data and identifies population health patterns.¹³⁹

The 2011 AHA case study, “*The Work Ahead*,” found ongoing costs associated with data analytics for *small ACOs* to be approximately \$385,000 per year, with approximately 20 percent of those costs linked to tracking quality reporting measures.¹⁴⁰ For *large ACOs*, the AHA estimated overall costs to be \$650,000 annually, with approximately 15 percent of these costs linked to tracking CMS quality reporting measures.¹⁴¹ However, the AHA may have overestimated these costs, as seven months after the AHA’s study was released, CMS decreased the number of quality reporting measures from 65 to 33 in the November 2011 Shared Savings Program Final Rule.¹⁴²

135 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

136 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

137 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 4.

138 “Getting Ready for Accountable Care Organizations,” By Joseph Goedert, Health Data Management (Apr. 1, 2011), http://www.healthdatamanagement.com/issues/19_4/getting-ready-for-accountable-care-organizations-42230-1.html?zkPrintable=1&nopagination=1.

139 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 10.

140 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 2.

141 “The Work Ahead: Activities and Costs to Develop an Accountable Care Organization,” American Hospital Association (2011), p. 2.

142 “Medicare Shared Savings Program: Accountable Care Organizations,” Federal Register, Vol. 76, Issue 19528 (Apr. 7, 2011), p. 67891.

V. COST OF CAPITAL AND CAPITAL STRUCTURE

V.A Capital Structure Decisions

The *capital structure decision* of an enterprise is how it plans to finance daily operations, as well as, how it plans to finance growth within the organization. Typically, *capital structure* is comprised of both short- and long-term debt and common and preferred stocks/equities. A healthcare enterprise's *capital structure decision* should only be finalized once the organization's *capital structure* and short- and long-term development goals are clearly defined, and when the organization has a clear understanding of the timeline for financing its capital needs. Organizations typically pursue the optimal ratio between debt and equity financing in order to derive the maximum benefit for the organization's stakeholders, e.g., the community in a tax-exempt organization, or the shareholders in an investor-owned organization.¹⁴³

The theory underlying achieving the optimal *capital structure* is typically viewed as "*a unique mix of debt and equity that minimizes the overall cost of financing assets.*"¹⁴⁴ Historically, the *capital structure* ratios of non-profit health enterprises have remained relatively consistent, while the *capital structure* ratios of for-profit healthcare organizations have reflected more sensitivity to market conditions.¹⁴⁵

EXHIBIT 6: HISTORICAL DEBT-TO-EQUITY RATIO FOR PUBLICLY TRADED HOSPITALS, 2001-2013

	A	B	C
	Date	Debt to Total Capitalization (%)	Debt to Total Capitalization Trailing Five Year Average (%)
1	12/31/01 ¹⁴⁶	15.09%	21.82%
2	12/31/02 ¹⁴⁷	13.14%	15.52%
3	12/31/03 ¹⁴⁸	16.40%	17.49%
4	12/31/04 ¹⁴⁹	19.57%	30.94%

143 "The Handbook of Financing Growth" By Kenneth H. Marks, et al., John Wiley & Sons, Inc., 2009, p. 22-23.

144 "Capital Structure Strategy in Health Care Systems," By John R.C. Wheeler, et al., Journal of Health Care Finance, Vol. 26, Issue 4 (2000), p. 43.

145 "Capital Structure Strategy in Health Care Systems," By John R.C. Wheeler, et al., Journal of Health Care Finance, Vol. 26, Issue 4 (2000), p. 4, 47.

146 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://ccrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

147 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://ccrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

148 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://ccrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

149 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://ccrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

	A	B	C
	Date	Debt to Total Capitalization (%)	Debt to Total Capitalization Trailing Five Year Average (%)
5	12/31/05 ¹⁵⁰	14.44%	28.21%
6	12/31/06 ¹⁵¹	21.27%	27.12%
7	12/31/07 ¹⁵²	22.69%	27.71%
8	12/31/08 ¹⁵³	53.17%	36.79%
9	12/31/09 ¹⁵⁴	62.47%	41.52%
10	12/31/10 ¹⁵⁵	43.51%	44.86%
11	3/31/11 ¹⁵⁶	52.38%	56.32%
12	12/31/11 ¹⁵⁷	64.04%	58.46%
13	3/31/12 ¹⁵⁸	67.48%	66.99%
14	3/31/13 ¹⁵⁹	51.81%	58.62%
15	3/31/14 ¹⁶⁰	48.00%	47.00%

There is evidence that the depressed hospital *capital structure* in 2009-2010 recovered as hospitals were able to access different sources of capital to improve weak *capital structures* encountered during the *Great Recession*.¹⁶¹ This improvement suggests a widening in the access to capital for healthcare enterprises looking to develop ACOs.

V.B Capital Allocation

150 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

151 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

152 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

153 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

154 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

155 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

156 "Ibbotson Cost of Capital: 2011 Yearbook," Morningstar, Section 8 (2013). The date in Column A changes from December to March in 2011 and beyond after Morningstar discontinued the production and support of its Valuation Resources product line, which the data as of December of each year until 2011 references. For the subsequent years, the information was retrieved from another Morningstar product, the annually updated book Ibbotson Cost of Capital.

157 "Ibbotson SBBI: 2012 Valuation Yearbook - Median data for SIC code 806: Hospitals 2001-2011," Morningstar, <http://csrc.morningstar.com/IndSearch.aspx#> (Accessed 4/25/12); "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

158 "Ibbotson Cost of Capital: 2012 Yearbook," Morningstar, Section 8 (2012).

159 "Ibbotson Cost of Capital: 2013 Yearbook," Morningstar, Section 8 (2013).

160 "2014 Valuation Handbook: Industry Cost of Capital," Chicago, IL: Duff & Phelps (2014), Section 806.

161 "8 Strategies for Hospital Borrowers in 2011," By James W. Blake, et al., *Healthcare Financial Management*, Vol. 65, Issue 4 (2011), p. 74.

V.B.1 Overview of Capital Budgeting

Investment in any new project (e.g., an ACO) may be financed either *internally* or *externally*. In furthering the investment decision, capital budgeting is “*the process of selecting long-lived assets, projects and programs according to financial criteria.*”¹⁶² *Internally financed projects* are funded from the reserves or cash flows of the organization, i.e., cash flows that would otherwise be available for distribution to the organization’s investors (owners within for-profit enterprises or the community within non-profit enterprises). Therefore, reinvestment of current earnings is a form of equity financing. Alternatively, *externally financed projects* derive their funding from sources outside the organization, by means of either *debt* or *equity* (see Section IV.A, above, for a further discussion of funding sources).

The financial composition of long-term debt between non-profit and for-profit healthcare enterprises often differs. Non-profit health systems have traditionally relied on “[p]ublic issues of long-term tax-exempt debt” which “*remain the largest source of low cost capital financing for most nonprofit hospitals and health systems.*”¹⁶³ A 2011 examination of non-profit hospital systems throughout the U.S. found that approximately 95 percent of the long-term debt of hospitals and health systems in the nation is comprised of tax-exempt debt.¹⁶⁴ For-profit systems typically carry much higher percentages of long-term debt compared to non-profit organizations. In addition, long-term debt financing tends to increase with the size of the healthcare system.¹⁶⁵

Since larger healthcare organizations may be best situated to quickly establish an ACO, it is likely that *long-term debt financing* of an ACO and these large, existing healthcare organizations will share significant similarities in composition and source. *Long-term debt financing* challenges that are unique to ACOs may include:

- (1) The variable creditworthiness of the individual ACO participants;
- (2) The division of contributions between participants to repay long-term debts; and,
- (3) How the individual capital needs of ACO participants can be adequately met through an umbrella ACO organization with disparate participating provider enterprises.

VI. VALUE METRICS

The definition of the term “*value metrics*” originates from several disciplines, and is commonly used throughout *academic*, *professional*, and *commercial* endeavors. Various methodologies may be utilized to analyze the expected *value* added by a prospective capital investment. The

162 “Financial Management in Health Care Organizations,” By Robert A. McLean, Delmar Publishers (2003), p. 192.

163 “An Examination of Contemporary Financing Practices and the Global Financial Crisis on Nonprofit Multi-Hospital Health Systems,” By Louis J. Stewart and Pamela C. Smith, *Journal of Health Care Finance* Vol. 37, Issue 3 (2011), p. 3.

164 “An Examination of Contemporary Financing Practices and the Global Financial Crisis on Nonprofit Multi-Hospital Health Systems,” By Louis J. Stewart and Pamela C. Smith, *Journal of Health Care Finance* Vol. 37, Issue 3 (2011), p. 3, 5.

165 “Patterns of Financing for the Largest Hospital Systems in the United States,” By William O. Cleverley & Jane Baserman, *Journal of Healthcare Management*, Vo. 50, Issue 6 (2005), p. 362.

calculation of each of these *value metrics* may be useful in assisting individuals who are considering investing in an ACO to determine their potential return on investment on the ACO. Among the methodologies available to analysts, the most commonly utilized include:

- (1) The *payback period* and the *discounted payback period methods*;
- (2) The *Accounting Rate of Return method*;
- (3) The *Net Present Value method*; and,
- (4) The *Internal Rate of Return method*.

Each of these methods has its strengths and weaknesses that should be carefully considered before selecting a method to utilize in the analysis of an investment project.

The *value metrics* of the healthcare delivery system are shaped by four elements, i.e., the “*Four Pillars*” of healthcare valuation: (1) *regulatory*; (2) *reimbursement*; (3) *competition*; and, (4) *technology*, which serve as a framework for analyzing the *viability, efficiency, efficacy, and productivity* of healthcare enterprises. The calculation of *value metrics* will assist a healthcare enterprise’s investors in determining the impact of ACO development on the *overall value* of the healthcare enterprise. The types of analyses described, below, provide a *numerical measure* of the *expected magnitude* of the probable change in *value* to be derived from ACO development, as well as clear principles upon which an enterprise’s decision makers can base their *investment decisions*, including their consideration of the requirements for *capital formation, financial feasibility, and economic returns*.

VI.A Cash Flow Analysis

The calculation of the various *value metrics* initially entails an analysis of the *expected economic benefit* that will accrue to ACO investors. The cash flow analysis calculates the *potential profitability* within the federal ACO market for ACOs of varying size. For the purpose of this analysis, a *small ACO* is defined as providing services for only 5,000 Medicare beneficiaries, the minimum number of beneficiaries required for participation in the MSSP. A *medium ACO* is defined as providing services to 20,000 beneficiaries, and a *large ACO* is defined as providing services to 80,000 beneficiaries. In addition, under the recently proposed modification to the MSSP, federal ACOs have the option to choose one of three models: (1) Track 1, a *one-sided model* featuring low reward and low risk, in which the ACO may earn up to 50 percent of the *shared savings*; (2) Track 2, a *two-sided model* featuring moderate reward and moderate risk, in which the ACO may earn up to 60 percent of the *shared savings*, but must bear the risk for *shared losses*; or, (3) Track 3, a *two-sided model* featuring high reward and high risk, in which the ACO may earn up to 75 percent of the *shared savings*, but must also bear the risk for *shared losses*.¹⁶⁶ The following analysis considers all three options.

¹⁶⁶ “Methodology for Determining Shared Savings and Losses under the Medicare Shared Savings Program,” Department of Health and Human Services, Nov. 2012, 5, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/ACO_Methodology_Factsheet_ICN907405.pdf (Accessed 2/12/14); “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72844-72845.

Under the MSSP, ACOs may only achieve *shared savings* when Medicare beneficiary costs are determined to be below a calculated benchmark *and* in excess of an indicated *minimum savings rate* (MSR). An anticipated benchmark and MSR for ACOs of various sizes is illustrated below, in Exhibit 7: *General Federal ACO Information for Shared Savings and Losses*. It is important to note that this cash flow analysis is based on the proposed modification to the MSSP, published in the *Federal Register* on December 8, 2014.

EXHIBIT 7: GENERAL FEDERAL ACO INFORMATION FOR SHARED SAVINGS AND LOSSES¹⁶⁷

	A	B	C	D	E
	ACO Characteristics	Size of ACO			Calculation
		Small	Medium	Large	
1	Number of ACO Beneficiaries	5,000	20,000	80,000	
2	Average Per Capita Cost	\$11,376	\$11,376	\$11,376	3 Year Average of Historical Expenditures
3	Benchmark (i.e., Predicted Beneficiary Expenditures)	\$56,880,000	\$227,520,000	\$910,080,000	Line 1 x Line 2
4	Risk Models				
5	<i>One-Sided (Track 1)</i>				
6	Minimum Savings Rate (MSR)	3.9%	2.5%	2.0%	
7	Minimum Amount of Cost Reduction Required to Experience Shared Savings	\$2,218,320	\$5,688,000	\$18,201,600	Line 3 x Line 6
8	<i>Two-Sided (Track 2)</i>				
9	Minimum Savings Rate (MSR)	3.9%	2.5%	2.0%	
10	Minimum Amount of Cost Reduction Required to Experience Shared Savings	\$2,218,320	\$5,688,000	\$18,201,600	Line 3 x Line 9
11	<i>Two-Sided (Track 3)</i>				
12	Minimum Savings Rate (MSR)	2.0%	2.0%	2.0%	
13	Minimum Amount of Cost Reduction Required to Experience Shared Savings	\$1,137,600	\$4,550,400	\$18,201,600	Line 3 x Line 12

The amount of *shared savings* a federal ACO may receive under the MSSP is capped. The cap for a Track 1 ACO is 10 percent of the calculated benchmark expenditures; the cap for a Track 2 ACO is 15 percent; and, the cap for a Track 3 ACO is 20 percent.¹⁶⁸ Under the “*best case*”

167 “National Health Expenditure Projections 2013-2023” Center for Medicare & Medicaid Services, September 17, 2014, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> (Accessed 11/19/2014), Table 17; “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72807-72808, 72844-72845.

168 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72844-72845.

scenario,” an ACO that has met all quality goals (so as not to have their *shared savings* decreased) would achieve *enough cost reductions* to receive the *maximum shared savings*, equal to their *cap*. An illustration of the *maximum* amount of *shared savings* that an ACO could expect to achieve under the MSSP is set out below, in Exhibit 8: *Maximum Shared Savings*.

EXHIBIT 8: MAXIMUM SHARED SAVINGS¹⁶⁹

	A	B	C	D
	Total Savings Payment Cap (i.e., Maximum Shared Savings an ACO May Achieve)	Size of ACO		
		Small	Medium	Large
1	One-Sided (Track 1) - 10% of Benchmark (see Exhibit 7, Line 3)	\$5,688,000	\$22,752,000	\$91,008,000
2	Two-Sided (Track 2) - 15% of Benchmark (see Exhibit 7, Line 3)	\$8,532,000	\$34,128,000	\$136,512,000
3	Two-Sided (Track 3) - 20% of Benchmark (see Exhibit 7, Line 3)	\$11,376,000	\$45,504,000	\$182,016,000

From the *first dollar* above the calculated benchmark, any *cost reductions* above the *minimum savings rate* (MSR), up to the *cap*, will result in *shared savings*. The *range of cost reduction* from the benchmark that would result in *shared savings* for each ACO size classification and *shared savings disbursement option* is displayed below, in Exhibit 9: *Range of Cost Reduction Resulting in Shared Savings*.

EXHIBIT 9: RANGE OF COST REDUCTION RESULTING IN SHARED SAVINGS¹⁷⁰

	A	B	C	D	E	F	G
	Type of ACO	Small ACOs		Medium ACOs		Large ACOs	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
1	One-Sided (Track 1)	\$2,218,320	\$11,376,000	\$5,688,000	\$45,504,000	\$18,201,600	\$182,016,000
2	Two-Sided (Track 2)	\$2,218,320	\$14,220,000	\$5,688,000	\$56,880,000	\$18,201,600	\$227,520,000
3	Two-Sided (Track 3)	\$1,137,600	\$15,168,000	\$4,550,400	\$60,672,000	\$18,201,600	\$242,688,000

169 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72845.

170 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72844-72845.

Minimum cost reduction resulting in shared savings calculated as the result of the Benchmark (see Exhibit 7, Line 3) multiplied by the MSR (see Exhibit 7, Lines 6, 9, and 12).

Maximum cost reduction resulting in shared savings calculated as the result of the Total Savings Payment Cap (see Exhibit 8) divided by the appropriate *Quality Sharing Rate*: up to 50% for Track 1 ACOs, up to 60% for Track 2 ACOs, and up to 75% for Track 3 ACOs. In order to earn the maximum *Quality Sharing Rate* for a given Track, the ACO must achieve a sufficiently high score on various quality metrics, as discussed above.

As indicated above, in Exhibit 9, the *two-sided models for shared savings distribution* establish a much greater financial incentive than the alternative *one-sided model*. In exchange for a *higher percentage* of their cost reductions being applied to *shared savings* (i.e., 60 percent for ACOs in Track 2 and 75 percent for ACOs in Track 3, as compared to 50 percent for ACOs in Track 1), ACOs choosing a *two-sided model* are also exposed to the added risk of *potential shared losses*.

The “*worst case scenario*” for any ACO occurs when the enterprise *exceeds* their calculated benchmark by a *sufficient* amount to be liable for the *applicable capped shared losses* amount. Once the *minimum loss ratio* (MLR) buffer is reached, an ACO will be liable for a portion of *shared losses* from the *first dollar* over the benchmark up to the *designated cap* for the given year. For Track 2 ACOs, the *designated cap* on losses varies with the performance year (PY), as follows: (1) 5% of the benchmark in PY 1; (2) 7.5% of the benchmark in PY 2; and, (3) 10% of the benchmark in PY 3. For Track 3 ACOs, the cap on losses is always 15% of the ACO’s benchmark.¹⁷¹ The *loss sharing limit* for each ACO size classification, and for each year of the contract term, is illustrated in Exhibit 10: Maximum Shared Losses, below.

EXHIBIT 10: MAXIMUM SHARED LOSSES¹⁷²

	A	B	C	D
	Loss Sharing Limit (i.e., Maximum Shared Losses an ACO May Incur)	Size of ACO		
		Small	Medium	Large
1	One-Sided (Track 1)	No Risk		
2	Two-Sided (Track 2)	Varies with Performance Year (PY)		
3	PY 1 - 5% of Benchmark (See Exhibit 7, Line 3)	\$2,844,000	\$11,376,000	\$45,504,000
4	PY 2 - 7.5% of Benchmark (See Exhibit 7, Line 3)	\$4,266,000	\$17,064,000	\$68,256,000
5	PY 3 - 10% of Benchmark (See Exhibit 7, Line 3)	\$5,688,000	\$22,752,000	\$91,008,000
6	Two-Sided (Track 3) - 15% of Benchmark (See Exhibit 7, Line 3)	\$8,532,000	\$34,128,000	\$136,512,000

Notably, for ACOs that are subject to shared losses, an ACO’s MLR is the same percentage as the ACO’s MSR, but is applied to cost overages instead of cost savings. For example, a Track 2 ACO with 20,000 beneficiaries would have need to generate 2.5% of their benchmark in savings in order to reap shared savings payments, or 2.5% of their benchmark in losses in order to incur shared loss liabilities.¹⁷³ The range of expenditures over the benchmark that would result in *shared losses* for each ACO size classification, and for each year of the contract term, is displayed below, in Exhibit 11: *Range of Cost Overage Resulting in Shared Losses*.

171 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72845.

172 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72845.

173 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72808.

EXHIBIT 11: RANGE OF COST OVERAGE RESULTING IN SHARED LOSSES¹⁷⁴

	A	B	C	D	E	F	G	
Type of ACO	Small ACOs		Medium ACOs		Large ACOs			
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum		
1	One Sided (Track 1)	No Risk						
2	Two Sided (Track 2)	Varies with Performance Year (PY)						
3	PY 1	\$2,218,320	\$4,740,000	\$5,688,000	\$18,960,000	\$18,201,600	\$75,840,000	
4	PY 2	\$2,218,320	\$7,110,000	\$5,688,000	\$28,440,000	\$18,201,600	\$113,760,000	
5	PY 3+	\$2,218,320	\$9,480,000	\$5,688,000	\$37,920,000	\$18,201,600	\$151,680,000	
6	Two Sided (Track 3)	\$1,137,600	\$11,376,000	\$4,550,400	\$45,504,000	\$18,201,600	\$182,016,000	

To justify the significant costs associated with ACO development and operation, a potential ACO investor should consider whether the anticipated *annual shared savings* will off-set the required *ACO related capital expenditures*, which are discussed in Section IV.B: *Capital Investment for ACO Development*. Given the *cap on shared savings*, some ACOs (primarily small ACOs) may not be able to accumulate the necessary *financial benefit* to off-set the *ACO related costs*. The annual expected cash flow for ACOs of each size may be estimated by assuming a “*best case scenario*,” in which an ACO achieves the *maximum shared savings*, and, therefore, the *maximum expected future cash flows* (i.e., the expected cost savings less the expected *operational and capital costs* of the ACO) over the initial three year contract term,¹⁷⁵ and considering the necessary initial *start-up investment*.

In regards to an ACO’s ability to meet benchmarks and generate shared savings, interim financial results for select MSSP ACO initiatives, recently released by CMS, are encouraging, as nearly half of the ACOs that began operations in 2012, 54 of 114, had lower expenditures than

174 “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72807-72808, 72844-72845.

Minimum cost overage resulting in shared losses calculated as the result of the Benchmark (see Exhibit 7, Line 3) multiplied by the *Minimum Loss Rate* (MLR) (see Exhibit 7, Lines 6, 9, and 12).

Maximum cost overage resulting in shared losses calculated as the result of the *Loss Sharing Limit* divided by the appropriate *Shared Loss Rate*.

Loss Sharing Limit is calculated as a percentage of the ACO’s benchmark: (1) 5% of the benchmark for Track 2 ACOs in PY 1; (2) 7.5% of the benchmark for Track 2 ACOs in PY 2; (3) 10% of the benchmark for Track 2 ACOs in PY 3 and any subsequent PYs; (4) 15% of the benchmark for Track 3 ACOs (does not vary with PY).

Shared Loss Rate follows the methodology for the *Quality Sharing Rate*, excluding Track 1 ACOs, which are not at risk for losses: up to 60% for Track 2 ACOs, and up to 75% for Track 3 ACOs. The maximum cost overages calculated above assume the maximum *Shared Loss Rate*.

175 “Medicare Program; Medicare Shared Savings Program: Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235, p. 72781.

projected.¹⁷⁶ Additionally, CMS reported that 29 of the 54 ACOs that exceeded their benchmarks generated savings of more than \$126 million.¹⁷⁷

VI.B *Feasibility Analysis*

A useful metric for evaluating a projected likelihood of success, defined as a project which increases the overall enterprise's *value*, is a basic feasibility analysis, which can be performed utilizing the results in Exhibit 7, above. A federal ACO, utilizing the assumptions above, may need to generate approximately two to nine percent savings per capita before generating positive cash flow, depending on the ACO's size and model for *shared savings distribution*. The following *feasibility analysis* indicates that larger ACOs require fewer savings per capita in order to *break even*, compared to smaller ACOs.

Generation of positive cash flow is a necessary condition for the ACO investment to have a positive impact on the overall value of the enterprise, but is not sufficient in and of itself. As stated above, the goal of a healthcare enterprise's management should be to maximize the value of the enterprise to its *stakeholders* (e.g., investors/owners or beneficiaries in the community served). Anticipation of *only a positive cash flow* from an investment project alone lacks *sufficiency* for determining the success of a project, because the anticipated gains should be weighed against the *initial investment outlay*. An investment may be capable of generating a *positive cash flow* without ever accumulating enough expected benefit to offset the *startup investment costs*. From a strictly financial perspective, an investment project which fails to generate *positive net cash flow* will never be able to accrue enough *net economic benefit* to the ACO project stakeholders to offset the initial investment.

It is possible, however, that certain *indirect benefits* may accrue to the stakeholders in the ACO. If these benefits are sufficient in magnitude to compensate the stakeholders, either monetarily or non-monetarily, for their initial investment and any ongoing losses experienced by the operation of the ACO, then the investment *may* make rational sense. These possible *positive externalities* will be discussed below, in Section IV.H: *Considerations of Value for the Positive Externalities of ACOs*.

VI.C *Payback Period And Discounted Payback Period Methods*

176 "Press Release: Medicare's Delivery System Reform Initiatives Achieve Significant Savings and Quality Improvements – Off to a Strong Start," The Centers for Medicare & Medicaid Services, Jan. 30, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2014-Press-releases-items/2014-01-30.html> (Accessed 4/17/14).

177 "Press Release: Medicare's Delivery System Reform Initiatives Achieve Significant Savings and Quality Improvements – Off to a Strong Start," The Centers for Medicare & Medicaid Services, Jan. 30, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2014-Press-releases-items/2014-01-30.html> (Accessed 4/17/14).

For an investment, such as in an ACO, the simplest *value metric* to calculate is the *Payback Period Method*. The *Payback Period Method* calculates the “*expected number of years required to recover the original investment.*”¹⁷⁸ The intuition underlying this methodology is that an investment with a protracted payback period would be undesirable to an investor, due to the delay in the *return on*, and *return of*, their *investment capital*. In the particular instance of the ACO investment analyzed here, the initial term of the federal ACO contract with CMS is three years. If the payback period for the ACO investment exceeds this three year limit, then the likelihood of receiving the *return on* or even the *return of* the invested capital would be contingent upon continuing to contract with CMS. Due to the uncertainty related to the future prospect of renegotiating the Federal ACO contract, investors would prefer that the investment payback period be less than the initial three year term.

Concerns have been raised regarding the *Payback Period Method*, particularly the failure of this analysis to consider the *timing* of the *cash flows*. The *Payback Period Method* gives equal weight to *cash flows*, regardless of the *time period* within which they are recognized. Typical investors would require compensation for the delay in accessing their invested capital. The longer the delay, the greater the amount of compensation that will be required. Due to the uncertainty related to future events, rational investors will only postpone current consumption (i.e., through investing) if they reasonably expect to have an opportunity for increased consumption in the future. This *time value of money*¹⁷⁹ reflects the cost of obtaining the necessary capital required for the ACO investment, in the form of payments to the debt and equity holders. The lack of consideration of the *present value* of the *cash flows* utilized in the *Payback Period Analysis* creates a tendency to underestimate the true (i.e., in present value terms) payback period.

This present value shortcoming can be addressed by utilizing a modified method, i.e., the *Discounted Payback Period Method*. As the name implies, the *Discounted Payback Period Method* converts each cash flow into its *present value* equivalent by *discounting* at an appropriate *risk-adjusted rate*.¹⁸⁰ The payback period is then calculated utilizing these *cash flows* adjusted to *present value*.

Generally speaking, the larger the ACO, the shorter the payback period will be. If a large ACO reduces the average beneficiary’s expenditures to the same extent that a small ACO does, the large ACO will generate more shared savings payments *in aggregate*, due to the larger population of beneficiaries. Furthermore, 2013 survey data from the *National Association of ACOs* (NAACO) indicate that as the size of an ACO grows, the associated start-up costs *per beneficiary* are reduced.¹⁸¹ For example, the NAACO survey data show that a typical ACO with 26,000 beneficiaries would have start-up costs that are approximately 60% higher than a typical

178 “Essentials of Managerial Finance,” By J. Fred Weston & Eugene F. Brigham, The Dryden Press: 9th ed. (1990), p. 564.

179 “Dictionary Of Health Economics and Finance,” By David Edward Marcinko & Hope Rachel Hetico, Springer Publishing Company (2007), p. 359.

180 “Corporate Finance,” By Stephen A. Ross, et al., Canada, McGraw-Hill Ryers: 4th Canadian ed. (2005), p. 942.

181 “National ACO Survey: Conducted November 2013” National Association of ACOs, January 21, 2014, <https://www.naacos.com/pdf/ACOSurveyFinal012114.pdf> (Accessed 5/7/2015), p. 2.

ACO with only 5,000 beneficiaries.¹⁸² However, in this example, the larger ACO has over 400% more beneficiaries (and therefore, more potential revenue from shared savings) than the smaller ACO. Therefore, when comparing large ACOs to small ACOs, the large ACO's increased revenue potential will likely outweigh the large ACO's increased start-up costs, resulting in shorter payback periods.

VI.D *AARR Method*

An alternative metric for measuring the value impact of a capital budgeting project is the *Average Accounting Rate of Return (AARR) Method*, which is calculated by dividing the *average net income* for the project by the initial investment cost. This provides a measure of the *annual return on the investment* as expressed in accounting measures.

While the AARR method provides insight to the analyst regarding the relative return of a project in *accounting* terms, its main *drawback* is that, by utilizing the *average net income amount*, it fails to consider the *timing* of the net income. The net income in the most recent period is given equal weight as the net income in more remote periods, in contrast to standard financial and economic theory, which posits that, all things being *equal*, investors will prefer receiving cash flows *sooner* rather than *later*, and that any delay in receipt of expected an anticipated benefit comes at a cost.

VI.E *Net Present Value*

Another useful metric for evaluating an investment's projected likelihood of success is the *Net Present Value (NPV)*. The NPV of an investment project is the discounted value of the differences over time between monetary costs and benefits in each period.¹⁸³ Healthcare enterprises may employ a NPV analysis to evaluate an ACO's potential impact on the enterprise's financial profile, as well as on its needs for total available capital and allocation decisions related to utilization of existing capital,¹⁸⁴ which would consequently provide a financial investment basis for determining whether or not to form an ACO. These healthcare enterprises should seek to determine whether the additions to net cash flow generated from the formation of the ACO over the ACO's lifetime will be greater than the initial *start-up* and *maintenance costs* of the project after consideration of the enterprise's cost of capital, as well as the probability of obtaining both a return on, and a return of, investment capital. For many enterprises contemplating ACO formation, a NPV analysis may indicate a probability that the expected return is *not sufficient* and, thus, the venture is *too risky* to undertake.

182 "National ACO Survey: Conducted November 2013" National Association of ACOs, January 21, 2014, <https://www.naacos.com/pdf/ACOSurveyFinal012114.pdf> (Accessed 5/7/2015), p. 2.

183 "The Dictionary of Health Economics," By Anthony J. Culyer, Edward Elgar Publishing Limited: 2nd ed. (2010), p. 347.

184 "Capital Planning for Clinical Integrations," Daniel M. Grauman et al., Healthcare Financial Management Association, Vol. 65 (2011), p. 4-5.

Unlike the previous methods, discussed above, the NPV analysis considers not only the *expected future economic benefit*, but also, through the *present value adjustment*, the *timing* of those *expected future cash flows*. Recall that the *discounted payback period method* also considers the *timing* of the expected cash flows of an ACO investment, but its *insistence* upon selecting projects with the *shortest payback period* creates a preference for *shorter term*, more liquid investments at the expense of *longer term*, less liquid investments with greater value potential. The NPV analysis avoids this myopic tendency by determining the present value equivalent of *all* future cash flows. As a result, using an NPV analysis may prevent a healthcare enterprise from disregarding a long term project with greater potential value, a likely occurrence when using the *discounted payback period method*.

VI.F *Internal Rate Of Return*

Closely related to the NPV method is the *Internal Rate of Return (IRR) method*. The IRR method attempts to determine a “*hurdle*” rate, i.e., the *minimum* accepted rate of return for a project, for the proposed investment. Based upon the anticipated future economic benefits that will accrue to the stakeholders in the ACO, the IRR represents the required rate of return that would render the NPV of the project equal to zero.¹⁸⁵ In other words, the IRR represents the *maximum rate* (in percentage terms) at which the project’s investors, both *debt* and *equity*, could be compensated for the project to leave the value of the enterprise unchanged. The IRR is useful for comparison to the project’s *cost of capital*. A *cost of capital* in excess of the IRR indicates that the project would *fail to generate sufficient net economic benefit* to offset its expected *operational and capital costs* and would be an *inefficient* use of the *available capital*. An IRR which exceeds a project’s cost of capital, on the other hand, indicates that the project would likely improve the value of the enterprise. There exists a strong relationship between NPV and IRR – a project with a positive NPV will, by necessity, have an IRR that exceeds the project’s cost of capital, so long as the rate of discount applied in the NPV analysis equals the project’s cost of capital. An important limitation of the IRR method is that it is possible for two projects to have identical IRRs but different NPVs, depending on the timing and magnitude of the expected cash flows and the size of the initial investment. In this type of situation, the IRR would provide no guidance in the selection *between* two projects. However, for the purpose of determining the feasibility of the ACO investment, the IRR and NPV will be *indistinguishable* in their policy recommendations.

VI.G *Further Feasibility Analysis*

The above IRR analysis was performed under the assumption that the ACO would be capable of achieving the *maximum* cost reduction shared revenue under the one- and two-sided disbursement models. Utilizing the NPV approach, as presented above, it is also possible to determine the *minimum* amount of cost reductions an enterprise would be required to achieve,

185 “Dictionary of Health Insurance and Managed Care,” By David Marcinko, Springer Publishing Group (2006), p. 161.

over the initial three year term of the ACO contract, to avoid a negative value impact for the overall enterprise (i.e., a negative NPV). Similar to the logic underlying the IRR, the anticipated level of cost reductions could be adjusted to the point that a zero NPV is produced. This level of cost reduction would represent a benchmark that healthcare enterprises considering ACO investment would have to surpass to anticipate a positive value impact to the ACO investment. The percent cost reductions necessary to achieve a zero net present value for an ACO investment under the “*best case scenario*” assumptions are presented below in Exhibit 12: *Break Even Analysis for ACOs of Various Sizes*.

EXHIBIT 12: BREAK EVEN ANALYSIS FOR ACOs OF VARIOUS SIZES¹⁸⁶

	A	B	C	D	E
	ACO Characteristics	Small ACO	Medium ACO	Large ACO	Calculation
1	Number of Beneficiaries	5,000	20,000	80,000	
2	Average Per Capita Cost	\$11,376	\$11,376	\$11,376	
3	Start-Up Costs	\$1,400,000	\$2,750,000	\$2,250,000	
4	One-Sided (Track 1)				
5	Minimum Amount of Cost Reduction required to Experience Shared Savings	\$2,218,320	\$5,688,000	\$18,201,600	See Exhibit 7, Line 7.
6	Maximum Quality Sharing Rate	50%	50%	50%	
7	Minimum Amount of Cost Reduction required to recoup Start-Up Costs	\$5,018,320	\$11,188,000	\$22,701,600	(Line 3 / Line 7) + Line 6
8	Per Capita Cost Reduction	\$1,004	\$559	\$284	Line 8 / Line 1
9	Per Capita Cost Reduction (Percent)	8.8%	4.9%	2.5%	Line 9 / Line 2
10	Two-Sided (Track 2)				
11	Minimum Amount of Cost Reduction required to Experience Shared Savings	\$2,218,320	\$5,688,000	\$18,201,600	See Exhibit 7, Line 10.
12	Maximum Quality Sharing Rate	60%	60%	60%	
13	Minimum Amount of Cost Reduction required to recoup Start-Up Costs	\$4,551,653	\$10,271,333	\$21,951,600	(Line 3 / Line 13) + Line 12
14	Per Capita Cost Reduction	\$910	\$514	\$274	Line 14 / Line 1
15	Per Capita Cost Reduction (Percent)	8.0%	4.5%	2.4%	Line 15 / Line 2
16	Two-Sided (Track 3)				
17	Minimum Amount of Cost Reduction required to Experience Shared Savings	\$1,137,600	\$4,550,400	\$18,201,600	See Exhibit 7, Line 13.
18	Maximum Quality Sharing Rate	75%	75%	75%	
19	Minimum Amount of Cost Reduction required to recoup Start-Up Costs	\$3,004,267	\$8,217,067	\$21,201,600	(Line 3 / Line 19) + Line 18
20	Per Capita Cost Reduction	\$601	\$411	\$265	Line 20 / Line 1
21	Per Capita Cost Reduction (Percent)	5.3%	3.6%	2.3%	Line 21 / Line 2

Enterprises considering investment in an ACO should assess whether the necessary cost reductions, given the number of beneficiaries they serve, are attainable. This analysis confirms the conclusions of earlier evaluations, which indicate that larger ACOs have a *higher likelihood of success*. This scale advantage can be primarily attributed to the ability of large ACOs to apply *modest* per beneficiary cost savings across a large number of beneficiaries.

186 “National Health Expenditure Projections 2013-2023” Center for Medicare & Medicaid Services, September 17, 2014, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> (Accessed 11/19/2014), Table 17; “National ACO Survey: Conducted November 2013” National Association of ACOs, January 21, 2014, <https://www.naacos.com/pdf/ACOSurveyFinal012114.pdf> (Accessed 5/7/2015), p. 2; “Medicare Program; Medicare Shared Savings Program; Accountable Care Organizations; Proposed Rule” Federal Register Vol. 79, No. 235 (December 8, 2014), p. 72844-72845, 72870.

VI.G.1 Next Generation ACOs

In March 2015, CMS announced a new classification of ACOs, called the “*Next Generation*” model. Compared to current models, Next Generation ACOs (NGACOs) feature a higher ratio of shared savings or losses.¹⁸⁷ Specifically, NGACOs may opt for an arrangement with risk sharing rates of 80% (which grows to 85% after three years) or a “*Full Performance Risk*” arrangement, wherein the NGACO bears 100% of the risk for their savings or losses.¹⁸⁸ In both of these types of arrangements, savings and losses are capped (set at 15% of the NGACO’s financial performance benchmark).¹⁸⁹

NGACOs differ from standard MSSP ACOs in several key ways. First, NGACOs’ financial benchmarks will be calculated in a different manner from MSSP ACOs. Although CMS has yet to publish the specific methodology, they have stated that NGACOs will utilize a prospectively-set benchmark, which will be based on: (1) the NGACO’s historical baseline expenditures; (2) regional expenditure trends; (3) adjustments for risk factors; and, (4) a discount, which is based on a quality adjustment and two efficiency adjustments.¹⁹⁰ Additionally, NGACOs must serve at least 10,000 beneficiaries,¹⁹¹ indicating that they may tend to be larger than standard MSSP ACOs, which have a minimum of 5,000 beneficiaries.¹⁹² Furthermore, NGACOs may choose from four different payment mechanisms, including: (1) standard *fee-for-service* (FFS) payments; (2) standard FFS payments in addition to a monthly infrastructure payment, which must be repaid to CMS; (3) population-based payments, wherein the NGACO receives reduced FFS payments in exchange for monthly payments based on a projection of the annual reduction in FFS payments; or, (4) full capitation, available in 2017.¹⁹³ Finally, NGACOs do not utilize a MSR or MLR, relying instead on the discount described above.¹⁹⁴ This discount sets the financial benchmark below historical expenditures, thus forcing ACOs to generate a certain amount of savings before any shared savings payments are earned. In this way, the discount functions in a similar manner to the MSR, except that the threshold for savings will vary with each ACO. Furthermore, it should be noted that without a MLR, NGACOs may be subject to shared losses for any expenditures above the financial benchmark.

187 “Next Generation ACO Model” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/initiatives/Next-Generation-ACO-Model/> (Accessed 3/18/2015).

188 “Next Generation ACO Model: Model Overview Presentation” Centers for Medicare & Medicaid Services, March 17, 2015, <http://innovation.cms.gov/Files/slides/nextgenaco-odf1slides.pdf> (Accessed 3/20/2015), p. 14.

189 “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 3/20/2015), p. 32.

190 “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 3/20/2015), p. 13.

191 “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 3/20/2015), p. 18.

192 “Accountable Care Organizations: What Providers Need to Know” Centers for Medicare & Medicaid Services, April 2014, http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO_Providers_Factsheet_ICN907406.pdf (Accessed 5/15/2015), p. 3.

193 “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 3/20/2015), p. 14-16.

194 “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 3/20/2015), p. 12.

To illustrate the relative risk and reward of NGACOs in comparison to standard MSSP ACOs, an additional break-even analysis, similar to Exhibit 12 above, is included in Exhibit 13, below. For the purposes of this analysis, only medium and large ACOs are considered (a NGACO is limited to 10,000 beneficiaries or more). Furthermore, the benchmarks have been calculated as the historical expenditures per capita multiplied by the population of NGACO beneficiaries and modified by an assumed discount of 1%. Additionally, the same start-up costs have been assumed for NGACOs as were used for standard MSSP ACOs (based upon the NAACO survey), operating under the assumption that NGACOs will have similar cost structures. Note that, given similar populations and expenditures per capita, NGACOs need to generate significantly smaller savings per capita in order to break-even, when compared to standard MSSP ACOs.

EXHIBIT 13: BREAK EVEN ANALYSIS FOR NGACOS¹⁹⁵

	A	B	C	D
	NGACO Characteristics	Medium NGACO	Large NGACO	Calculation
1	Number of NGACO beneficiaries	20,000	80,000	
2	Start-Up costs	\$2,750,000	\$2,250,000	
3	Historical spending per capita (2012)	\$11,522	\$11,522	
4	NGACO benchmark	\$228,135,600	\$912,542,400	Line 1 x Line 3 x 99%
5	Arrangement A			
6	Sharing Rate (PY 1-3)	80%	80%	
7	Savings Needed to Recoup Start-Up Costs, PY 1-3	\$3,437,500	\$2,812,500	Line 2 / Line 6
8	Per Capita Savings	\$172	\$35	Line 7 / Line 1
9	Per Capita Savings (Percent)	1.5%	0.3%	Line 8 / Line 3
10	Arrangement B			
11	Sharing Rate	100%	100%	
12	Savings Needed to Recoup Start-Up Costs	\$2,750,000	\$2,250,000	Line 2 / Line 11
13	Per Capita Savings	\$138	\$28	Line 12 / Line 1
14	Per Capita Savings (Percent)	1.2%	0.2%	Line 13 / Line 3

195 “National Health Expenditure Projections 2013-2023” Center for Medicare & Medicaid Services, September 17, 2014, <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> (Accessed 11/19/2014), Table 17; “Next Generation ACO Model: Request for Applications” Centers for Medicare & Medicaid Services, 2015, <http://innovation.cms.gov/Files/x/nextgenacorfa.pdf> (Accessed 5/7/2015), p. 18, 36; “National ACO Survey: Conducted November 2013” National Association of ACOs, January 21, 2014, <https://www.naacos.com/pdf/ACOSurveyFinal012114.pdf> (Accessed 5/7/2015), p. 2.

VI.H Considerations Of Value For The Positive Externalities Of ACOs

Outside of the potential of financial return to investors from ACO development, an ACO may also have indirect investment-related beneficial effects for third parties. These external benefits received by third parties are known as *positive externalities*, and occur when a third party has a *legitimate interest in a particular outcome*.¹⁹⁶ For the purposes of this paper, potential outcomes are the successful development and implementation of ACOs, by which value may accrue to third parties, including: (1) patients, employers, and the broader U.S. population (*society*); (2) health systems, hospitals, and physicians (*providers*); and, (3) managed care organizations, commercial insurers, and Medicare (*payors*). Each of these third parties may benefit from ACOs, which benefits may be differentiated between *monetary* and *non-monetary* gains.

VI.H.1 Value to Society

The positive *social externality* resulting from the implementation and development of an ACO represents the interest held by society in an ACO. Patient population benchmarks, on a local, regional, and/or national level, before and after ACO development, are useful in discerning the *statistically significant* evidence of improved *population health outcomes* resulting from an ACO, which can be used as an indication of whether an ACO has truly added *value* to the community within which they operate.¹⁹⁷

The *monetary societal value* contributed by ACOs will likely be in the form of *cost reductions*. Efficiencies achieved by ACOs, and the effects of coordinated care on the ACO's patient population, may benefit society in the form of: (1) lower overall *healthcare expenditures* as a percentage of the GDP, which is discussed, above, in Section III.A: *The 2007-2009 Great Recession and its Lingering Effects*; (2) slowing of the current national growth of healthcare expenditures, which is also discussed, above, in Section III.A: *The 2007-2009 Great Recession and its Lingering Effects*; (3) out of pocket cost reductions for *patient populations*¹⁹⁸; and/or, (4) implicit and explicit cost reductions for the *community that an ACO serves*, e.g., reduction in lost workdays to illness or improved quality of life.

There is evidence that federal ACOs, in particular, may be able to decrease costs and save money, although the amount of savings, if any, seems to be inconsistent among Medicare ACOs. CMS announced in January 2014 that the 137 federal ACOs in the MSSP and Pioneer ACO programs saved a combined \$380 million in 2012, the first year of operation.¹⁹⁹ Approximately

196 "Health Care Economics," By Paul J. Feldstein, Thomson Delmar Learning: 6th ed. (2005), p. 424.

197 ROBERT JAMES CIMASI, ACCOUNTABLE CARE ORGANIZATIONS: VALUE METRICS AND CAPITAL FORMATION, 213 (Taylor & Francis 2013).

198 "A Decade of Health Care Cost Growth Has Wiped Out Real Income Gains For an Average US Family," By David I. Auerbach and Arthur L. Kellermann, Health Affairs, Vol. 30, No. 9 (2011), p. 1634.

199 Note that: (1) five federal ACOs did not report quality data; and, (2) the results from Performance Year 2 has not yet been reported for MSSP ACOs. "Medicare's delivery system reform initiatives achieve significant savings and quality improvements - off to a strong start," Centers for Medicare & Medicaid Services, Jan. 30, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2014-Press-releases-items/2014-01-30.html> (Accessed 3/10/15); "Fact sheets: Medicare ACOs continue to succeed in improving care, lowering

20 percent of the ACOs generated approximately 50 percent of the savings reported by Medicare.²⁰⁰ Approximately \$147 million of that \$380 million total was attributed to the 23 Pioneer ACOs.²⁰¹ This disproportionate distribution of savings among Pioneer and MSSP ACOs may indicate that the increased risk sharing required of Pioneer ACOs may result in greater *shared savings*, or that Pioneer ACOs are further developed, and are consequently able to generate revenue more quickly. The savings attributable to just the MSSP ACOs seems to be consistent with CMS's original projection that the MSSP ACOs could generate \$940 million in federal healthcare expenditure reductions in the first four years of operation.²⁰² Similar trends in cost reduction can be expected with the development of NGACOs, as well.

An ACO's *non-monetary societal value* is characterized by the coordination of care leading to *improved quality outcomes* and *greater access to care*, two of the three goals of ACOs and healthcare reform. ACOs aim to create value, as measured by quality outcome improvements, through regulation of quality reporting and changes in reimbursement policy. As reported by CMS in November 2014, 11 of the 19 Pioneer ACOs exceeded expectations in their second year of operation on 33 quality measures aimed at creating societal value, i.e., by providing quality care at a reduced expense.²⁰³

VI.H.2 Value to Providers

In considering the benefits provided to ACOs, *providers* may have diverse viewpoints on the perception of value. Some providers may be investors or owners, focusing on *financial feasibility analyses* discussed above, while other providers may be ACO participants who may have an interest in the outcomes of ACO development and the possible *monetary* and *non-monetary positive externalities*.

ACO entities receive *monetary value* from ACO development through returns on ACO investments resulting from *shared savings payments* or *improved efficiencies*. ACOs may opt to disburse *shared savings* in *excess of capital needs* to ACO providers in the form of *financial bonuses*, thereby also *disbursing the monetary value*. Providers do not need to be directly employed by the ACO to receive a portion of *shared savings*, nor do they need to be

cost growth", Centers for Medicare & Medicaid Services, Nov. 7, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014-11-10.html> (Accessed 3/10/15).

200 "Medicare's delivery system reform initiatives achieve significant savings and quality improvements - off to a strong start," Centers for Medicare & Medicaid Services, Jan. 30, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2014-Press-releases-items/2014-01-30.html> (Accessed 3/10/15).

201 "Medicare's delivery system reform initiatives achieve significant savings and quality improvements - off to a strong start," Centers for Medicare & Medicaid Services, Jan. 30, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2014-Press-releases-items/2014-01-30.html> (Accessed 3/10/15).

202 "Lower Costs, Better Care: Reforming our Health Care Delivery System," Centers for Medicare & Medicaid Services, Press Release, Feb. 28, 2013, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-Sheets/2013-Fact-Sheets-Items/2013-02-28.html> (Accessed 3/10/15).

203 "Fact sheets: Medicare ACOs continue to succeed in improving care, lowering cost growth", Centers for Medicare & Medicaid Services, Nov. 7, 2014, <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2014-Fact-sheets-items/2014-11-10.html> (Accessed 3/10/15).

physicians,²⁰⁴ as the ACO governing board has the discretion to determine which providers will be included in *shared savings distributions*. Some commercial ACOs also provide direct monetary value to participating providers in the form of *value-based reimbursement models* and *physician compensation arrangements*, which are more common in ACOs with an internal payor. The provision of *direct monetary value* through these types of arrangements may provide financial incentives to physicians with the goal of lowering individual expenditures, and resulting in *direct monetary value* to providers participating in an ACO.

ACOs that achieve *shared savings*, either in the commercial or the federal market, will also likely experience greater *financial returns* from the increased efficiency of their practice (e.g., lower administrative costs, more efficient physician time-management, and fewer billing mistakes).²⁰⁵ Providers may also experience enhanced *utility* in the form of access to a larger market share, since ACO development is often associated with mergers, joint ventures, and other types of market consolidation.²⁰⁶ As physicians and hospitals in a community join together under the umbrella of an ACO, referrals will likely stay within that *collaboration of caregivers*.²⁰⁷

Non-monetary value for ACO participants is largely characterized by those benefits which may arise from a hospital-physician relationship, e.g., EHR interoperability and the ability to mine data to improve the quality of care. Access to *sophisticated technology* allows *providers* to access information on patients' health outcomes, as well as, the ability to evaluate their services in greater depth than previous paper and pencil processes. Improvements in the ability of providers to gather data for *evidence-based medicine* may also lead to better development of *best practices*, based on the strengths and weaknesses that become apparent from a comparative outcomes analysis.²⁰⁸ Greater efficiencies gained from *best practices* could result in both *monetary* (i.e., lower administrative costs and fewer billing errors) and *non-monetary* (i.e., better patient outcomes leading to improved reputation and lessened stress resulting from inefficient practice behaviors) *value* for providers. Some commercial ACOs provide their participating providers with *outcome reports* to facilitate the use of evidence-based strategic planning. For example, within *Cigna's Collaborative Accountable Care program*, each participating provider practice receives an annual report, which assesses the provider's performance in the areas of: (1) patient access; (2) care coordination; (3) adherence to *evidence-based medicine*; (4) prescribing practices; and, (5) value-based referrals.²⁰⁹ Provider awareness of ACO efficiencies is of particular importance to give ACOs an emphasis on physician leadership and involvement.

204 "Medicare Shared Savings Program: Accountable Care Organizations," Federal Register Vol. 76 No. 212 (Nov. 2, 2011), p. 67976 (to be codified at 42 CFR pt. 425).

205 "From Acquisition to Integration: Transforming a Hospital Into an ACO," By John T. Fink and Sean Hartzel, Healthcare Financial Management Association, Oct. 1, 2014, <http://www.hfma.org/Content.aspx?id=2767> (Accessed 3/10/15).

206 "Accountable Care Organizations: Value Metrics and Capital Formation," Robert James Cimasi, MHA, ASA, FRICS, AVA, CM&AA, Boca Raton, FL: Taylor & Francis (2013), p. 220.

207 "Referral and Consultation Communication Between Primary Care and Specialist Physicians: Finding Common Ground," By Ann O'Malley and James Reschovsky, Archives of Internal Medicine, Vol. 171, No. 1 (2011), p. 64.

208 "A Novel Approach to Determining Best Medical Practices: Looking at the Evidence," By John Tucker, Houston Journal of Health Law & Policy, Vol. 10 (2010), p. 147.

209 "Collaborative Accountable Care: CIGNA's Approach to Accountable Care Organizations," CIGNA, 2011, http://newsroom.cigna.com/images/9022/media_gallery/knowledge_center/CollaborativeCare_WhitePaper_2011.pdf (Accessed 11/22/11).

VI.H.3 Value to Payors

Payor interest in ACO development will likely be primarily monetary, i.e., the value of increased profits from shared savings and lower reimbursement expenditures. Contracting between ACOs and payors allows for both parties to benefit from *shared savings*. A portion of the benefit realized from patient expenditure reductions achieved by an ACO will be kept by the associated payor. Ultimately, as ACOs *gain efficiency*, and their benchmark for anticipated patient expenditures is reduced, it is expected that payors may be able to lower their reimbursement payments to the ACO. Within the federal ACO market, where CMS is the payor that contracts with an ACO, improved ACO patient outcomes may create additional monetary value for CMS (over and above CMS's portion of the *shared savings*) by leading to fewer administrative complications regarding billing and readmissions. Private payors with similar claims and readmission issues may also experience similar value. In addition, the emphasis on preventative medicine common among ACOs also provides an avenue for further cost reductions in the future by preventing significant and costly future procedures.

VII. REGULATORY CONSIDERATIONS IN ACO CAPITAL FORMATION

Several regulatory considerations should be addressed in the development, implementation, and operation of an ACO, e.g., *Anti-kickback Statute*, *False Claims Act*, *Stark Law*, *Other Fraud and Abuse Laws*, *Antitrust*, and *Tax Exempt Status*. Ongoing changes in the structure, operation, and financing of provider enterprises, assets, and services in many emerging healthcare organizations, including ACOs, will likely result in a growing intensity of regulatory scrutiny from such regulatory bodies as the *Office of Inspector General (OIG)*; the *Internal Revenue Service (IRS)*; the *Department of Justice (DOJ)*; and, the *Federal Trade Commission (FTC)*. Legal advisory services are sought by ACO stakeholders. Thereafter, typically through the offices of their legal counsel, ACO developers and managers will seek the services of certified valuation professionals to ensure that any underlying transactions of healthcare enterprises, assets, or services related to the development of the ACO (e.g., joint venture, merger, acquisition, contracting) address the regulatory thresholds of *fair market value (FMV)* and *commercial reasonableness (CR)*.

ACO participants and/or outside investors who invest capital in an ACO will likely expect a return on their investment related to a certain percentage of the ACO's margin. Such an arrangement between an ACO and its investors must meet these FMV and CR thresholds to avoid potential regulatory sanctions. The valuation consulting assignment that is most often requested by legal counsel for an ACO client is the development and reporting of a certified opinion related to whether transactional elements involved in the capital formation activities, e.g., integration, affiliation, acquisition, and divestiture, of the various provider enterprises, assets, and services meet the FMV and CR regulatory thresholds.

A certified opinion, prepared in compliance with professional standards by an independent, credentialed valuation professional and supported by adequate documentation that each of the proposed elements of the transaction are both at FMV and CR, will significantly enhance the likelihood of the ACO establishing a risk averse, defensible position that the ACO is in compliance, in the event that it faces regulatory scrutiny. In developing a certified opinion of FMV and CR, certain financial analyses may be required, including, e.g., the development of:

- (1) Requisite due diligence;
- (2) Economic and demographic analyses and trend reports;
- (3) Patient utilization demand forecasts;
- (4) Reimbursement yield and payor mix reports;
- (5) Forecasts, budgets, and provider income/shared savings distribution plans; and,
- (6) Financial projections and pro forma reports.

Importantly, however, CMS and OIG released waivers of certain fraud and abuse laws for ACO participants in November of 2011, and extended these waivers in October of 2014.²¹⁰ There are several types of waivers; however, the broadest of these waivers are the ACO Pre-participation and ACO Participation waivers.²¹¹ The ACO participation and pre-participation waivers remove the requirements of the Stark Law and Anti-kickback Statute (i.e., requirements of fair market value and commercial reasonableness), as well as the gainsharing civil monetary penalties for those ACOs:

- (1) That have entered, or are acting with the good faith intent, to participate in the MSSP;
- (2) That meet certain requirements regarding governance, leadership, and management;
- (3) Whose governing body have made a bona fide determination that the arrangement with an ACO Participant reasonably relates to the purposes of the Shared Savings Program, such as:
 - (a) The promotion of accountability for the quality, cost, and overall care for a Medicare patient population;
 - (b) Managing and coordinating care for Medicare FFS beneficiaries through an ACO;
 - (c) Encouraging investment in infrastructure and redesigned care processes for high quality and efficient service delivery for patients, including Medicare beneficiaries; and,
- (4) That document the arrangement and its authorization by the ACO's governing body.²¹²

Although ACO fraud and abuse waivers may potentially place many arrangements outside the scope of the Stark Law, Anti-kickback Statute, and civil monetary penalties, sole reliance on the waivers for compliance with these regulations may be unwise, as both CMS and OIG have indicated that these waivers may be narrowed in the future.²¹³

210 "Medicare Program; Final Waivers in Connection with the Shared Savings Program; Interim Final Rule" Federal Register Vol. 76, No. 212 (Nov. 2, 2011), p. 67992; "Medicare Program; Final Waivers in Connection with the Shared Savings Program; Continuation of Effectiveness and Extension of Timeline for Publication of Final Rule" Federal Register Vol. 79, No. 201 (Oct. 17, 2014), p. 62356.

211 "Medicare Program; Final Waivers in Connection with the Shared Savings Program; Interim Final Rule" Federal Register Vol. 76, No. 212 (Nov. 2, 2011), p. 68000-01.

212 "Medicare Program; Final Waivers in Connection with the Shared Savings Program; Interim Final Rule" Federal Register Vol. 76, No. 212 (Nov. 2, 2011), p. 68000-01.

213 "Medicare Program; Final Waivers in Connection with the Shared Savings Program; Interim Final Rule" 76 Fed. Reg. 67992 (11/2/2011), p. 68008.

Despite concerns about the longevity of the ACO waivers, some ACOs and ACO participants may place significant value on the flexibility afforded to them by these waivers, which may further incentivize participation in an ACO and the resulting positive externalities, discussed in Section VII.H above. These waivers may essentially create a gainsharing arrangement between the ACO and its participants, i.e., the fraud and abuse waivers may represent a non-monetary benefit of the ACO (in the form of positive externalities) which may allow the ACO to monetize and share some of this non-monetary benefit in the form of compensation no longer limited by Stark and AKS requirements, e.g., fair market value, for ACO participants. This circular incentive, resulting from ACO fraud and abuse waivers, between ACO participants, ACOs, and the resulting positive externalities further cements the idea of the government's increased emphasis on value (and, for tax-exempt ACOs, furtherance of a charitable mission) beyond mere financial benefit, which often includes providing positive externalities for the benefit of the community served by the ACO.

Additionally, in the event that tax-exempt enterprises, e.g., tax-exempt hospitals or health systems, are parties to the ACO, healthcare legal counsel will need to collaborate with appropriate tax counsel to ensure that the ACO meets the mandates required for preserving its 501(c)(3) tax exempt status.

Other *regulatory related services* related to ACO formation include establishing corporate compliance and risk management audit programs for monitoring a wide variety of legal and regulatory issues on a consistent basis, aiding in the acquisition and maintenance of licensing, certifications, and accreditations. Depending on the ownership and location of the assets and services comprising ACO, it may require legal consulting relating to the subject state's *Certificate-of-Need* program.²¹⁴

VIII. SUMMARY

Investor confidence in the profitability and sustainability of ACOs seems to be increasing, as indicated by: (1) the July 2013 announcement by UnitedHealth Group, the largest U.S. health insurance company, that it will double its current investment in ACOs to \$50 billion annually²¹⁵; and, (2) the rapid increase in the total number of ACOs, which increased the total number of Medicare ACOs from 237 to 366, reported as of January 2014,²¹⁶ serving more than 5.3 million Medicare beneficiaries.²¹⁷

214 "But do you really NEED it? How your state's Certificate of Need policy compares," Matthew Morrill, The Advisory Board Company <http://www.advisory.com/Research/Service-Line-Strategy-Advisor/The-Pipeline/2013/But-do-you-really-need-it> (Accessed 3/3/14).

215 "UnitedHealth Group, Quarterly Report" (Form10-Q) (Nov. 7, 2013), p. 25; "UnitedHealthcare Makes \$50 Billion Wager on Accountable Care As Obamacare Looms," By Bruce Japsen, Forbes, Jul. 10, 2013, <http://www.forbes.com/sites/brucejapsen/2013/07/10/unitedhealthcare-makes-50-billion-wager-on-accountable-care-as-obamacare-looms/>.

216 Department of Health and Human Services Secretary Kathleen Sebelius announced that 123 new Medicare ACOs had been formed, extending access to about 1.5 million Medicare beneficiaries. "More partnerships between doctors and hospitals strengthen coordinated care for Medicare beneficiaries, Centers for Medicare & Medicaid Services, Press Release (Dec. 23, 2013),

A fall 2013 survey conducted by Premier, Inc. noted that 27 percent of the healthcare organizations already had an ACO established, representing a five percent increase from six months prior.²¹⁸ That Premier, Inc. survey projected that hospital involvement in ACOs will double in 2014, as over half of the surveyed healthcare organizations in the fall 2013 survey anticipated that they will be participating in an ACO by the end of 2014.²¹⁹ Additionally, the ratio of healthcare organizations implementing ACOs is shifting, as the ratio of ACOs formed by physician groups to the number of ACOs formed by health systems is approximately one to one, a significant change from early 2012, when the ratio of hospital-led ACOs to physician-led ACOs was two to one.²²⁰ As a result, at the end of 2013, the number of hospital-led ACOs reached 238, while the number of physician-led ACOs was 260.²²¹ Further, other entities, such as insurers or practice management groups, led just 47 ACOs in 2012, compared to 108 ACOs in 2013, an increase of 130 percent in one year.²²² The increase in hospital- and insurer-led ACOs provides empirical evidence of the notion that larger organizations are better-equipped to handle the financial risks associated with implementation and operations of ACOs, as noted in the “*Overview of Capital Concepts*”, above.

Still in their nascent stages, not all ACOs have, as yet, been proven to provide significant (or even positive) returns for investors, however, industry commentators believe that ACOs hold serious potential,²²³ and these organizations have begun to attract the interest of some venture capitalists. Regardless of where investment funds originate, the relative success of capital formation activities is a vital precursor to the development, implementation, and continued operation of ACOs. It is important in the development of ACOs to understand that adequately meeting the capital needs required for such an undertaking necessitates the measurement of the relationship between the *cost of capital formation/investment aspects* of the ACO’s development, and the *returns to that investment*, in the form of both *financial returns* and *non-monetary benefits*. In this manner, a robust analysis of the *value metrics*, related to the development of the ACO, informs potential investors as to the expected *value added* attributes of the prospective investment in the ACO capital formation process, and in determining the impact of ACO development on the *overall value* of the participating healthcare enterprise.

<http://www.hhs.gov/news/press/2013pres/12/20131223a.html> (Accessed 1/9/14); “Accountable Care Growth in 2014: A Look Ahead,” By David Muhlestein, Health Affairs, January 29, 2014, <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/> (Accessed 4/17/14).

217 “More partnerships between doctors and hospitals strengthen coordinated care for Medicare beneficiaries,” Centers for Medicare & Medicaid Services, Press Release (Dec. 23, 2013), <http://www.hhs.gov/news/press/2013pres/12/20131223a.html> (Accessed 1/9/14).

218 “Current Trends in the Healthcare Supply Chain,” Premier, Inc., Economic Outlook (Fall 2013), p. 19; “Unlocking the Hidden Value of Healthier Communities,” Premier, Inc., Economic Outlook (Fall 2013), p. 37.

219 “Unlocking the Hidden Value of Healthier Communities,” Premier Inc., Economic Outlook (Fall 2013), p. 34.

220 As of June 20, 2013, there were 202 physician-led ACOs and 189 hospital ACOs. “A look at physician-led ACOs: What’s driving them, and where they’re headed,” By Beth Thomas Hertz, Medical Economics, Jun. 10, 2013, <http://medicaleconomics.modernmedicine.com/medical-economics/news/look-physician-led-acos-whats-driving-them-and-where-theyre-headed>.

221 “Accountable Care Growth in 2014: A Look Ahead,” David Muhlestein, Health Affairs Blog, January 29, 2014, <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/> (Accessed 4/22/14).

222 At the end of 2013, there were 260 physician-led ACOs (43%), 238 hospital-led ACOs (39%), 55 insurer-led ACOs (9%), and 53 ACOs led by other organizations, e.g. non-profit community organizations and practice management companies (9%). “Accountable Care Growth in 2014: A Look Ahead,” By David Muhlestein, Health Affairs Blog, January 2014, <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/> (Accessed 4/22/14).

223 “Early Adopters of the Accountable Care Model: A Field Report on Improvements in Health Care Delivery,” By Sharon Silow-Carroll & Jennifer N. Edwards, The Commonwealth Fund (2013), p. 9.

IX. ADDITIONAL AUTHOR INFORMATION

Robert James Cimasi, MHA, ASA, FRICS, MCBA, CVA, CM&AA, serves as Chief Executive Officer of HEALTH CAPITAL CONSULTANTS (HCC), a nationally recognized healthcare financial and economic consulting firm headquartered in St. Louis, MO, serving clients in 49 states since 1993.

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