

## Introduction to the S&P Healthcare Economic Indices

In October 2010, S&P Indices launched a new index series designed to provide an independent, timely estimate of the rate of change in the total cost of healthcare in the United States.

Developed in conjunction with actuaries and healthcare experts at Health Index Advisors (“HIA”), a joint venture between Aon Hewitt and Milliman Inc., the S&P Healthcare Economic Indices (“Indices”) are designed to reflect the change in monthly healthcare provider claims for the traditional Medicare and commercial health insurance populations in the United States.

Total healthcare cost trends<sup>1</sup> have varied widely since the 1970s. Over the most recent decade, trends have varied from annual increases in the mid-single digits to mid-teens.<sup>2</sup> This variability makes it difficult for employers, health insurance carriers, government organizations, and others to effectively manage the financial liabilities associated with healthcare programs.

The Indices are designed to estimate this trend in healthcare claims from two related perspectives:

- By type of healthcare service provider.
  - Hospital (facility) services -- hospital inpatient and outpatient centers; and
  - Professional services -- physicians and other healthcare professionals.
- By type of benefit coverage through which the services are eventually paid.
  - Commercial health insurance programs (including health benefit programs sponsored by large self-funded employer groups); and
  - Traditional Medicare coverage.

This index series also includes composite indices which aggregate both the Medicare and commercial indices, and the hospital and professional services indices, in order to estimate the overall rate of change in related healthcare claims.

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<sup>1</sup> The use of the term “trend” in this document refers to the rate of change in per capita healthcare allowed claim costs. It is typically expressed as an annual rate.

<sup>2</sup> Pricewaterhouse Coopers’ Health Research Institute; “Behind the numbers\* Medical cost trends for 2010,” June 2009, page 6, figure 2.

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**S&P  
INDICES**

In total, the series comprises the following indices:

S&P Healthcare Economic Indices			
Composite Indices	S&P Healthcare Economic Composite Index	=	S&P Healthcare Economic Medicare Index + S&P Healthcare Economic Commercial Index
	"		"
Healthcare Provider	S&P Healthcare Economic Hospital Index	=	S&P Healthcare Economic Hospital Medicare Index + S&P Healthcare Economic Hospital Commercial Index
	+		+
	S&P Healthcare Economic Professional Services Index	=	S&P Healthcare Economic Professional Services Medicare Index + S&P Healthcare Economic Professional Services Commercial Index

Core features of this index series include:

- **Timeliness and frequency of publication:** The Indices are published monthly, approximately seven weeks after the end of the reporting month. This marks a significant improvement for the healthcare market since existing claim cost measures typically are reported on a quarterly or annual basis with up to a 20 month lag.
- **Objectivity:** The data used to calculate the Indices are taken from a range of government and proprietary data sources including the Bureau of Labor Statistics (“BLS”), Centers for Disease Control and Prevention (“CDC”), and Centers for Medicare and Medicaid Services (“CMS”).
- **Transparency and consistency:** S&P Indices collects the data used to calculate the monthly index values and updates the Indices using a consistent, publicly-available methodology to assure comparability across time periods. The majority of the data used are publicly available.
- **Availability and granularity of the data:** The Indices break out the change in healthcare claims by type of healthcare provider and type of benefit coverage through which the claims are paid. In an effort to provide further granularity, S&P Indices plans to evaluate the feasibility of developing regional cost indices.

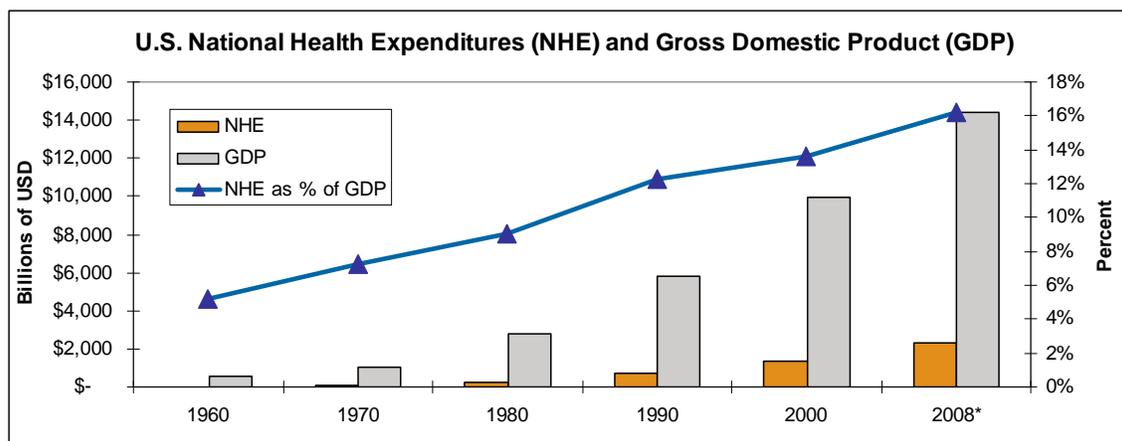
This document covers the following topics:

1. Cost Transparency in the U.S. Healthcare Market
2. S&P Healthcare Economic Indices Overview
3. Index History & Analysis
4. Potential Applications

## 1. Cost Transparency in the U.S. Healthcare Market

### Rising Cost of Healthcare

The total level of healthcare spending in the United States has increased consistently over the past several decades, rising at a compounded annual growth rate of approximately 7% in the latest ten-year period of available data (1998-2008).<sup>3</sup> In 2008, U.S. National Health Expenditures (“NHE”) reached US\$ 2.3 trillion, representing 16.2% of U.S. Gross Domestic Product (“GDP”). As the chart below shows, the rate of increase over the past several decades has resulted in a steadily larger share of U.S. GDP being allocated to healthcare services.



Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; U.S. Department of Commerce, Bureau of Economic Analysis; and U.S. Bureau of the Census. \*2008 is the most recent data available from CMS.

### Who Pays for the Increase?

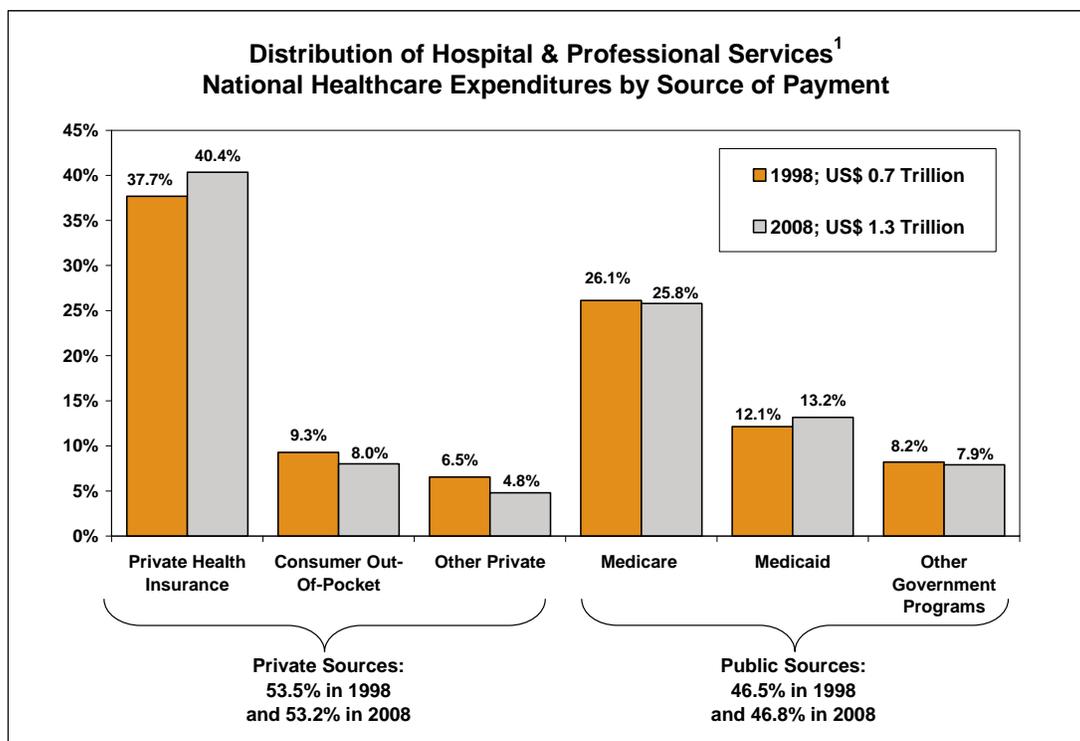
The rate at which healthcare costs are rising is a serious concern, most importantly for those responsible for its funding. In addition to the amount the consumer pays directly, the financing of the U.S. healthcare system is fragmented among various government (public) and private sector programs. The following represent the principal payment mechanisms through which healthcare services are funded.

- Government/public sector programs.
  - Medicare: Covers individuals age 65 and above (as well as other groups such as the disabled). Traditional Medicare coverage is split among Part A (inpatient hospital services), Part B (outpatient hospital services and professional services), and Part D (prescription drug services). Private health plans can enroll Medicare beneficiaries under the Medicare Advantage program, which allows health plans to offer an alternative to the traditional Medicare program.
  - Medicaid: A health program aimed at lower income individuals and families. Medicaid programs are a joint federal/state program and several states have developed highly visible Medicaid programs (such as the TennCare program in Tennessee).
  - State Children’s Health Insurance Program (“SCHIP”): A health program aimed at children in families that meet certain income level standards.

<sup>3</sup> Centers for Medicare and Medicaid Services; National Health Expenditure Data; “Table 1: National Health Expenditures Aggregate, Per Capita Amounts, Percent Distribution, and Average Annual Percent Growth, by Source of Funds: Selected Calendar Years 1960-2008.” Web.

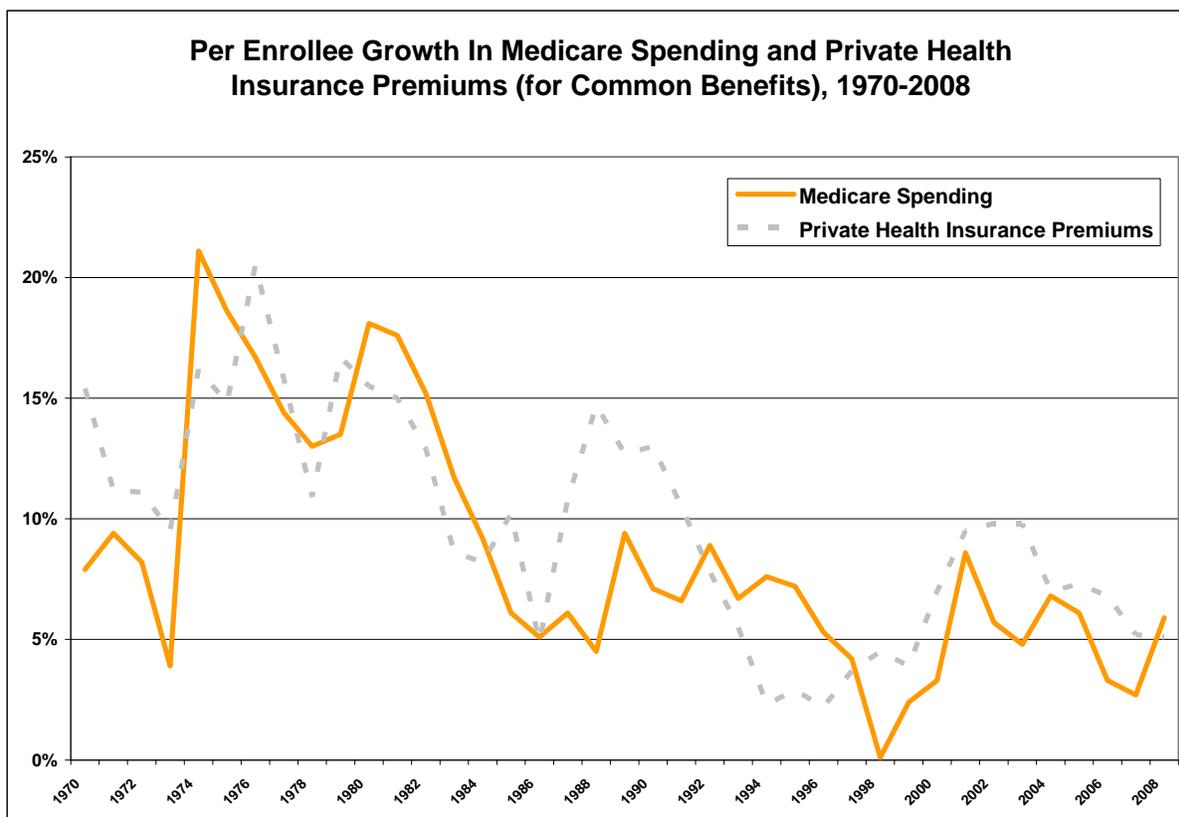
- The remaining public sector programs are primarily focused on specific groups including the Veteran’s Health Administration, the Indian Health Service and the Military Health System/TRICARE.
- Private sector programs.
  - Private/commercial health insurance plans, which are generally offered to individuals and smaller employers.
  - Self-funded health benefit plans, which are generally offered by larger employers who manage the coverage of health plans and outsource the claims administration to health insurance carriers or third-party administrators.
- Consumers.
  - Insured: Direct payments (copayments, deductibles, or other payments) made by consumers for services which are not fully reimbursed under their insurance program or which are not covered under their existing insurance plan (such as cosmetic or Lasik surgery).
  - Uninsured: Payments for services.

While the level of expenditures for hospital and professional services has increased 90% over the past decade, from US\$ 700 billion to US\$ 1.3 trillion, as illustrated by the chart below, the distribution among these sources of payment has remained stable during the same time period.



Source: Standard & Poor’s. Data from Centers for Medicare and Medicaid Services, “National Health Expenditure Data by Type of Service and Source of Funds: Calendar Years 2008 to 1960,” Web. <sup>1</sup>Only the Hospital Care, Physician and Clinical Services, Other Professional Services and Durable Medical Equipment categories were included for Hospital & Professional Services expenditures in this analysis.

Moreover, there has been a historically high correlation between the rate at which per-enrollee spending has increased for private and public programs, as the chart on the following page indicates for Medicare and private insurance premiums.



Source: "The Kaiser Family Foundation, Kaiser Fast Facts," with data from the Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, Table 13, at [www.cms.gov/NationalHealthExpendData/downloads/tables.pdf](http://www.cms.gov/NationalHealthExpendData/downloads/tables.pdf). Note: Per enrollee includes primary policy-holders plus dependents. Common benefits include hospital services, physician and clinical services, other professional services, and durable medical products; they exclude, for example, prescription drugs, home health care, non-durable medical products, and nursing home care.

## Funding Role of Private and Public Programs

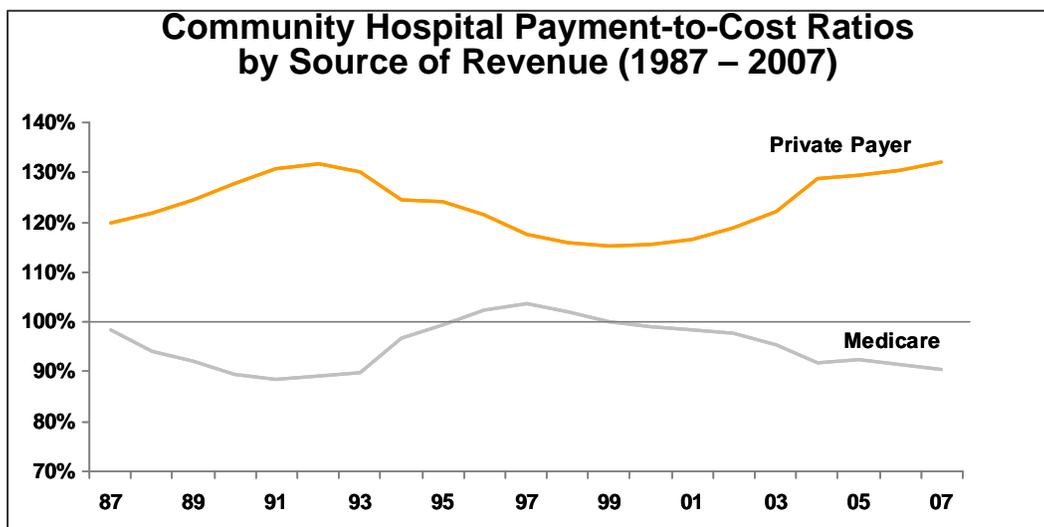
As indicated in the earlier chart (page 4), the majority of hospital and physician claims are funded, or paid, by Medicare (public) and commercial (private) health insurance programs.

The level of Medicare funding is largely dependent on the federal government. Fee schedules are established and published each year, allowing healthcare providers to estimate, from a pricing perspective, the approximate amount of revenue they will be able to derive from patients covered under the traditional Medicare program. While there are differing opinions on the extent to which it occurs, research indicates that, all other factors being equal, the level of federal funding for the Medicare program can impact claim cost levels in the commercial market. For example, a reduction in the level of federal funding for Medicare-covered services can result in increasing upward pressure on the prices charged for services in the commercial health insurance market. Healthcare providers may seek to compensate for potentially lower Medicare revenue with increased revenue from commercial payers. This is typically referred to as a "cost shift" from the Medicare program to the commercial sector.<sup>4</sup>

As the chart on the following page indicates for community hospitals, there is a significant difference in the average payment-to-cost ratios for hospital services between Medicare and commercial plans. Moreover, there appears to be an inverse relationship between the two types of plans, with commercial

<sup>4</sup> Healthcare Economist; "Do Hospitals 'Cost Shift' to the Privately Insured When Medicare Reduces Prices?" March 23, 2010.

plans incurring higher payment trends when public plans reduce the average level of payment relative to costs. This difference in payment levels has been cited as possible evidence for the existence of the cost shift referenced above.



Source: Standard & Poor's with data from the American Hospital Association's "Trendwatch Chartbook 2009" and Avalere Health analysis of American Hospital Association Annual Survey data, 2007, for community hospitals.

The funding role of commercial health insurance plans has changed considerably over the past several decades. Historically, health insurance plans were primarily responsible for managing the risk associated with healthcare services and providing payment based on "reasonable and customary" market prices. During the 1980s this changed to a role of negotiating pricing and services directly with healthcare providers. The rise of PPO (preferred provider organization) and HMO (health maintenance organization) programs placed health insurance plans in the position of forming and managing provider networks, where the negotiated price of such services became a proprietary secret. At the same time, the consolidation of healthcare providers, principally hospital systems, resulted in large scale provider organizations capable of gaining a competitive advantage in negotiating terms with insurance plans.

The changing market has also altered the relationship between health insurance plans and large employers, in both the public and private sectors. Due to the fact that larger employers are able to manage the short-term financial risks associated with their health benefit programs, they have placed more emphasis on having insurance plans manage the long-term rise in healthcare costs.

The result has been a change in the role of health insurance plans from providing short-term insurance services to providing long-term healthcare management services. This shift will likely be accelerated by some of the changes in the 2010 healthcare reform legislation (the Affordable Care Act), which places additional restrictions on the operations of health insurance plans. The changing nature of services provided by health insurance plans has resulted in a need for new tools and measures by which insurance plans and employers can better align their programs. Despite this growing concern regarding the level of healthcare trends, there are no historical industry-wide benchmarks that track the trend in per capita<sup>5</sup> healthcare costs for both the commercial health insurance and Medicare populations on a timely basis.

<sup>5</sup> The use of the term "per capita" in this document refers to the relevant insured population instead of the overall U.S. population.

## Existing Claim Cost Transparency

The principal costs incurred by private and public health programs are the medical claims submitted by hospitals and physicians for the programs' insured members. Determining the actual claim costs of these programs is difficult for several reasons:

- Claims data from commercial insurance programs are fragmented across multiple health insurance carriers, pharmacy benefit managers, and self-funded employers.
- Changes in covered benefits and levels of employment make it difficult to analyze commercial healthcare claims data on a consistent basis.
- Medicare payment data are published annually, on a quarterly basis, but are often subject to considerable restatement, making it difficult to determine the actual payment amounts for up to a year or more after the time of payment.
- NHE data are published on an annual basis with a 12 to 15 month lag, and it can be challenging to break out the data on a total allowed claim basis.

## Why Create an Index?

Tracking the change in per capita healthcare costs is critical for several reasons:

- The liabilities associated with retiree health plans are directly tied to changes in per capita claim costs. In order to more accurately assess the level of these liabilities, it is essential to have a consistent, public measure of the change in per capita healthcare costs. A more realistic set of actuarial assumptions and a more accurate valuation of future liabilities require an analysis of current and historical healthcare trends.
- Financial management of the near-term funding requirements for medical insurance/benefit plans also requires more accurate and timely measures of current healthcare trends.
- The availability of an independent index of healthcare trends offers the possibility of using an index to support financial contracts that allow parties to hedge their exposure to future changes in per capita claim costs.

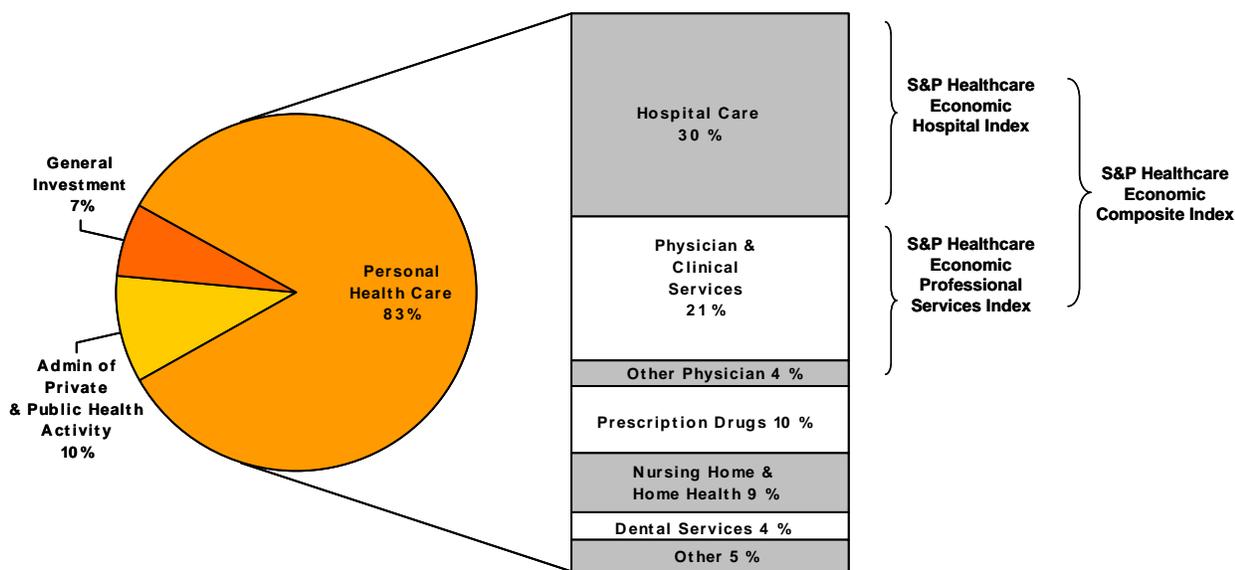
Moreover, the recently enacted healthcare reform legislation has the potential to cause a fundamental restructuring of the traditional relationships in the healthcare and health insurance industry. While the full extent of the changes will not be apparent for several years (and the status of the legislation itself is uncertain), it appears likely that several of the changes will drive the future rate of change in healthcare costs. It, therefore, is more important than ever to have a timely measure of per capita healthcare claim cost increases, as estimated by the S&P Healthcare Economic Indices.

## 2. S&P Healthcare Economic Indices Overview

In 2008, U.S. National Health Expenditures (NHE) reached US\$ 2.3 trillion, of which 30% (US\$ 0.7 trillion) was attributable to hospital services and another 25% (US\$ 0.6 trillion) was allocated to various physician services.<sup>6</sup>

**Breakdown of \$2.3 Trillion National Health Expenditures 2008**

**Approximate Scope of S&P Indices**



Source: Standard & Poor's; Data from Centers for Medicare & Medicaid Services; National Health Expenditure Data; Table 2.

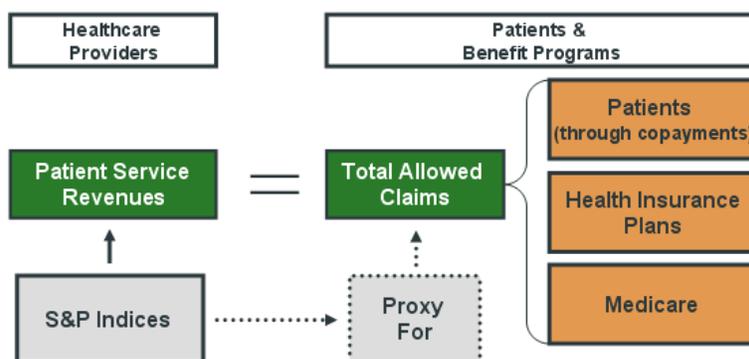
Together, these two categories represent the approximate scope of the S&P Healthcare Economic Indices, comprising over 55% of NHE, and nearly 70% of personal healthcare expenditures. The remaining 45% and 30%, respectively, is fragmented among several categories (prescription drugs, dental services, home healthcare, etc.), none of which represents more than 10% of NHE. As such, the S&P Healthcare Economic Indices seek to reflect changes in the two largest components of healthcare expenditures in the United States.

While NHE data and other similar public sources of healthcare data provide significant value to the market, they typically are only published on an annual basis and often with a significant delay or lag. Due to the lack of data on monthly healthcare expenditures, the S&P Healthcare Economic Indices are calculated using an economic model based predominantly on publicly available variables which are published more frequently, with a shorter lag, and which have a logical relationship to the changes in patient service revenues and the related change in total allowed claims.

<sup>6</sup> Source: Centers for Medicare and Medicaid Services; National Health Expenditure Data; "Table 2: National Health Expenditures Aggregate Amounts and Average Annual Percent Change, by Type of Expenditure: Selected Calendar Years 1960-2008." Web.

### What the Indices Measure

The S&P Healthcare Economic Indices seek to reflect the per capita change in revenues accrued<sup>7</sup> by healthcare providers (physicians and hospitals) each month for services provided to patients covered under traditional Medicare and commercial health insurance programs. In turn, since patient service revenues accrued by healthcare providers are analogous to the claim costs incurred by patients (through their copayments) and their benefit plans for services rendered by those providers, the Indices also estimate the per capita change in total allowed claim costs.<sup>8</sup> For the purposes of the S&P Indices, the term “per capita” refers to the insured U.S. population as measured by the employed population as a proxy for the Commercial Indices (as sourced from the BLS), and by the over-65 population as a proxy for the Medicare Indices (as sourced from the Census).



Source: Standard & Poor's.

The S&P Healthcare Economic Hospital Indices (“Hospital Indices”) and the S&P Healthcare Economic Professional Services Indices (“Professional Services Indices”) are designed to estimate the per capita change observed in their respective category of healthcare providers. The S&P Healthcare Economic Composite Indices (“Composite Indices”) are an aggregation of the Hospital and Professional Services Indices.

In assessing the cost of healthcare, it is also important to consider the difference between claims which are attributable to patients covered by Medicare and those which are attributable to patients covered by commercial health insurance plans. The S&P Healthcare Economic Medicare Indices (“Medicare Indices”) estimate the change in claims incurred under traditional Medicare. Those Medicare beneficiaries who have elected private coverage through a Medicare Advantage program are treated as if they are covered under the traditional Medicare program.

The S&P Healthcare Economic Commercial Indices (“Commercial Indices”) estimate the change in claims incurred under commercial health insurance programs, including health benefit plans provided by employers, regardless of whether the employer is using a self-funded program or a fully insured plan.

The S&P Healthcare Economic Composite Indices (the Composite Indices) are also an aggregation of the Medicare and Commercial Indices.

<sup>7</sup> Revenues accrued are the expected revenues based on published (Medicare) or pre-negotiated (commercial insurance) rates with benefit programs. These expected revenues represent the total amount due to the provider from both the patient (through copayments) and the benefit program.

<sup>8</sup> Total allowed claim costs are the payment amounts approved by benefit programs for payment. The actual payment of such claims may include both individual copayments and the benefit plan's payment.

Each of the Indices seeks to estimate the per capita change (for the insured U.S. population) in total allowed claims. This includes changes in utilization of services, cost of services, and the different mix of services provided. It is important to note that the Indices do not estimate the absolute level of current spending in dollars, but rather the month-to-month change in healthcare claim costs. The actual per capita cost of healthcare, both for Medicare and commercial benefit programs, varies widely across geographic regions (and even within the same state), based on the type of employer and other demographic factors.

Individuals covered under Medicare and commercial health insurance programs are typically responsible for paying a portion of the covered healthcare services directly to the service provider through the payment of deductibles, copayments, or other expense sharing provisions. The Indices seek to estimate the change in total allowed claims, including both the amounts paid by the individual and the amounts paid through the insurance program. The term “allowed” refers to the approved maximum reimbursement from benefit programs to healthcare providers after negotiated discounts, and may not correspond to the amount a healthcare provider bills the benefit plan.

Approximately two thirds of the U.S. population is covered by either Medicare or a commercial health insurance plan<sup>9</sup> and the expenditures associated with these patients account for nearly 70% of personal healthcare expenditures in the United States.<sup>10</sup> Therefore, the Indices are tracking the largest expenditure categories in the U.S. healthcare market both by the type of provider (hospital and physician) and by the type of benefit coverage (Medicare and commercial). As the impact of the recently enacted healthcare reform legislation takes effect, the portion of total healthcare expenses tracked through the Indices could change due to the subsidies provided and the resulting shift of uninsured individuals into public and private programs.

## Index Calculation

The index methodology for this series was adapted from that of Milliman’s proprietary Health Cost Index™ (HCI), an index that estimates the aggregate change in non-Medicare healthcare claim costs, which was introduced to the healthcare market more than 20 years ago. Then, as now, there were no other sources of public data which provided direct measurement of the monthly claim costs incurred by either the Medicare or the commercial health insurance populations in the United States. As such, the HCI evolved over time, as data sources changed, to an economic model based on publicly available variables which have a logical relationship to patient service revenues. For more than 20 years, the original HCI model has been broadly used as one of the primary benchmarks in the healthcare industry.

Prior to the development of the S&P Healthcare Economic Indices, S&P Indices and the healthcare and actuarial experts at HIA refined the HCI calculation model and tested the resulting pro-forma history against quarterly Medicare records, historical HCI results, and sample employer and insurer claims data provided to HIA. The tests produced high correlations, yet it should be noted that the Indices are market indicators, not actual measures of hospital and physician patient service revenues. In order to reconcile potential differences between the Indices and a market participant’s individual experience, healthcare insurers, providers, and users should recognize the role of regional, industry, and firm-specific differences in determining supply and demand.

<sup>9</sup> Centers for Medicare and Medicaid Services; NHE web tables; Health Insurance Coverage in 2009. Web.

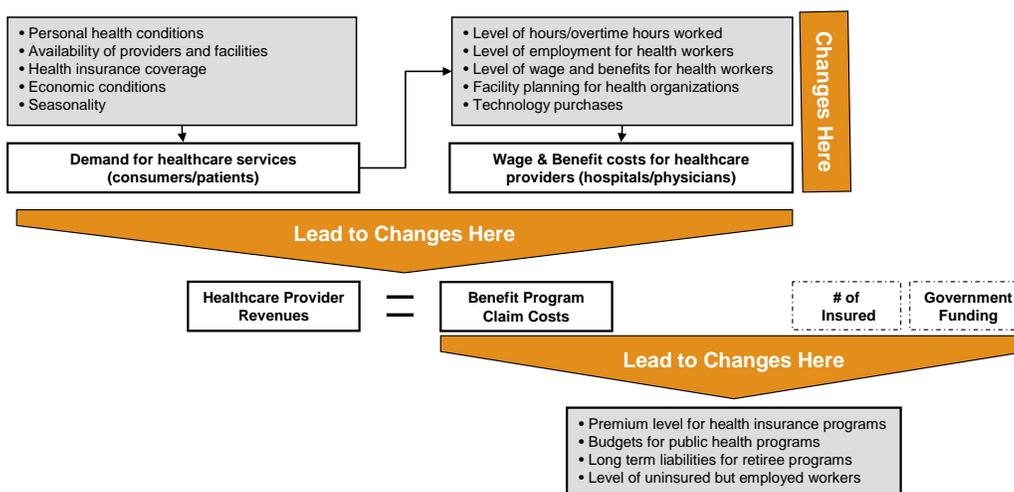
<sup>10</sup> Centers for Medicare and Medicaid Services; National Health Expenditure Data; “Table 2: National Health Expenditures Aggregate Amounts and Average Annual Percent Change, by Type of Expenditure: Selected Calendar Years 1960-2008.” Web.

The resulting economic model comprises two major phases. The first phase estimates change in patient service revenues and the second phase segments these changes into Commercial, Medicare, and Medicaid/Uninsured. More information on the calculation detail is available in the index methodology documents, which can be found at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).

The logic underlying the first calculation phase rests on the assumption that patient service revenues are highly correlated to changes in healthcare provider employment, wages, and benefits. This assumption is based on the following insights into the healthcare industry:

- The average prices hospitals and healthcare professionals receive for patient services vary yearly, but are often fixed through Medicare fee schedules or multiyear contracts between providers and commercial plans. This means that apart from negotiated contractual price increases, patient service revenues are largely influenced by fluctuations in the quantity or type of services provided.
- Due to the labor-intensive nature of healthcare services, changes in the quantity or type of services provided are closely correlated with changes in employment, wages, and benefits.
- Overall, employee compensation is the largest cost component for healthcare providers, representing approximately 60% of hospital expenditures<sup>11</sup> and 70% of physician expenditures.<sup>12</sup> In the short-term, compensation is the primary lever which healthcare providers can use to control for anticipated fluctuations in patient service revenues.

**Drivers & Impact of Patient Service Revenues / Claim Costs**



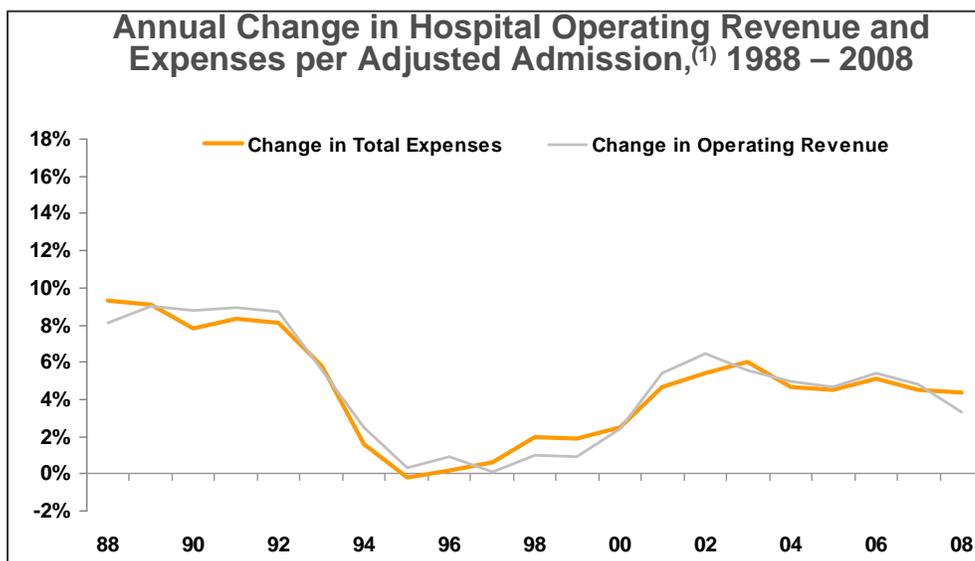
Source: Health Index Advisors.

Changes in compensation costs (employment, wages, and benefits) are, therefore, used as a predictor of revenue change. For most healthcare providers, particularly physician offices, labor costs account for the majority of operating costs. Such costs include wages (salary and bonus) and benefit expenses. Other expenses, such as the fixed costs associated with office/real estate expenses, technology

<sup>11</sup> Source: Centers for Medicare & Medicaid Services; Medicare Program Rates and Statistics; PPS Hospital, base year 2006; 2006 base weights from the “Quarterly Index Levels in the CMS Prospective Payment System (IPPS) Hospital 2006 Input Price Index using IHS Global Insight Inc. (IGI) Forecast Assumptions, by Expense Category: 1991-2020.” Web.

<sup>12</sup> Source: Centers for Medicare & Medicaid Services; Medicare Program Rates and Statistics; 2000 base weights from the Physician market basket from “Quarterly Index Levels in the CMS Medicare Economic Index using IHS Global Insight Inc. (IGI) Forecast Assumptions, by Expense Category: 1991-2020.” Web.

infrastructure, etc., are not included since (1) their inflexible nature makes it unlikely that they would track with short-term changes in patient service revenues; and (2) the addition or contraction of real estate or equipment may already be indirectly captured through employment, wages, and benefits. Additionally, there is a very close relationship between the changes in operating expenses and the associated changes in revenue, as the chart below indicates for hospitals.



Source: American Hospital Association's "Trendwatch Chartbook 2010" with data from Avalere Health's analysis of American Hospital Association Annual Survey data, 2008, for community hospitals. (1) An aggregate measure of workload reflecting the number of inpatient admissions, plus an estimate of the volume of outpatient services, expressed in units equivalent to an inpatient admission in terms of level of effort.

There are many factors that affect the general supply and demand for patient services and the resulting revenue in the healthcare industry:

#### Demand Factors:

- Number of buyers: The general size and insured status of the population.
- The general health status of the population.
- Consumer incomes: The financial ability of consumers to afford discretionary and non-discretionary healthcare services.
- Price of substitute goods: The cost of healthy living, "alternative" medical services, etc.
- Consumer expectations: Beliefs as to the future out-of-pocket costs that will be incurred for health conditions left untreated.

#### Supply Factors:

- Number of healthcare service providers.
- Input prices: The service provider's cost of providing healthcare services.
- Technology
- Taxes and subsidies
- Price of substitute goods: Non-healthcare investments available in the market which compete for capital investments.
- Producer expectations: Beliefs as to the future profitability of providing healthcare services.

The S&P Healthcare Economic Indices do not try to account directly for all of these factors. Rather, they are designed to capture material changes to the factors of supply and demand at a high-level by incorporating economic variables and other adjustments as applied to the aggregate industry. Once the compensation costs have been considered, additional economic variables, sourced from various government and proprietary sources, are incorporated into the calculation model. They include:

- **Malpractice insurance costs:** Malpractice costs impact healthcare claim cost trends in two ways. First, larger than expected increases in malpractice premiums can often translate into higher provider prices in the short-term. Second, research indicates that as malpractice

premiums increase, healthcare providers tend to increase the quantity of services provided in a form of “defensive medicine” as they seek to protect against future malpractice actions,<sup>13</sup> which has a longer-term and more significant impact on overall healthcare claim costs.

- **Impact of pneumonia/influenza (which reflects the impact of communicable diseases):** In the short-term, the impact or threat of an epidemic increases healthcare provider revenue expectations as more individuals are expected to seek healthcare services.
- **Incurred working days in each month:** The mix of working days in a month can have a significant impact on relative accrued patient service revenues, especially on a monthly and quarterly basis. The annual impact is much less substantial. The level of medical services demanded and provided varies according to the day of the week, and is also impacted by holidays. For example, physician services are typically lower during the weekend and holidays, reflecting the fact that most professional offices are closed, and hospital services are typically higher on Mondays than the rest of the week.
- **Change in real personal income:** Demand for healthcare services increases with the rise in real personal income over time. The change in real personal income reflects the long-term association between rising standards of living and increased healthcare spending.

## Calculation Differences Among the Indices

### Hospital & Professional Services Indices

As mentioned above, there is a strong correlation between hospital and physician employment costs and their expectations for patient service revenues. While the monthly rate of change may vary between these two types of healthcare providers, the calculation model for the Indices is consistent between the Hospital and Professional Services Indices. The primary difference between the two sets of Indices is, therefore, driven by the different types of data incorporated (hospital vs. professional services) and the timeline by which those data are updated or revised.

For both the Hospital and Professional Services Indices, the monthly change in total allowed claim costs is comprised of (1) a commercial health insurance component, (2) a Medicare component, and (3) a Medicaid and Uninsured component. The data are used to estimate monthly percent changes in both an overall trend and the Medicare component of the trend. From there the combined Medicare and commercial component is derived by adjusting for the impact of the Medicaid/Uninsured population, using the ratio of the Medicaid Producer Price Index (PPI) to the total PPI, both of which are published by the Bureau of Labor Statistics.

Finally, the Commercial and Medicare components are separated using expenditure ratios derived from annual NHE data published by the CMS.

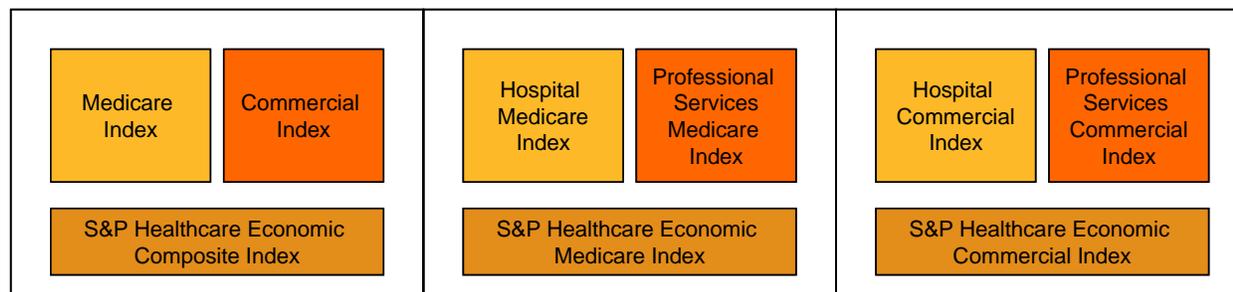
Details on the weights and calculation for both series are available in the S&P Healthcare Economic Hospital and S&P Healthcare Economic Professional Services Indices’ methodology documents available at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).

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<sup>13</sup> Katherine Baicker, Elliott S. Fisher and Amitabh Chandra, “Malpractice Liability Costs And The Practice Of Medicine In The Medicare Program,” *Health Affairs* 26, no 3 (2007): 841-852. Web.

### Composite Indices

Once the Hospital and Professional Services Indices are calculated, including the Medicare and Commercial Indices of each series, the Composite Indices are aggregated by weighting together individual indices as follows.



Details on the weights and calculation for this series are available in the S&P Healthcare Economic Composite Index Methodology available at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com)

### Restatements

As described earlier, the calculation model incorporates data from several government sources. As new information is received, these data are often restated by the government. The restatement of historical government data used in the index calculation model will, therefore, result in the restatement of the historical index levels. Each month, the Indices' data are recalculated and published in their entirety, incorporating any revisions to historic input variables that might have occurred over the month.

### Index Data and Interpretation

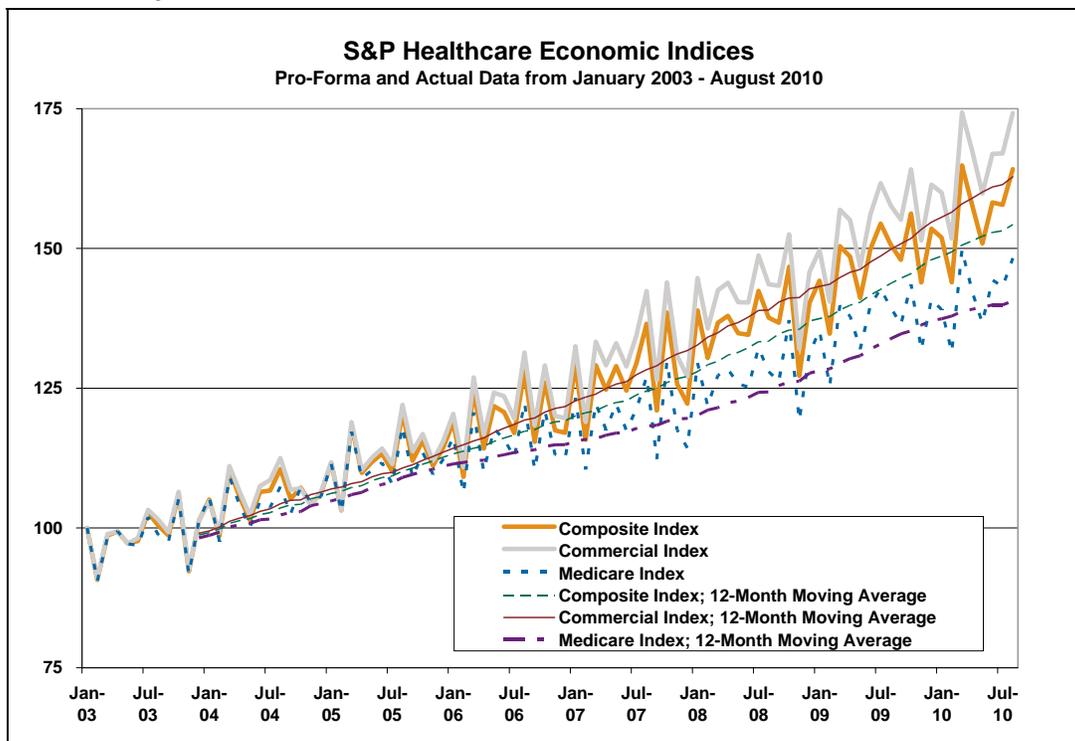
The 12-month moving average of the index levels for the S&P Healthcare Economic Indices are available through Standard & Poor's Web site, major quote vendors, numerous investment-oriented Web sites, and various print and electronic media. Within the healthcare industry, claim costs are often compared between one 12-month period and the same period in the prior year. As such, S&P Indices publishes each Index's 12-month moving average each month so that it can be compared with the same period of the prior year. This provides an indication of the annual growth rate of claim costs.

Due to the seasonality and annual variability of healthcare claim costs, most users prefer to use the index levels to evaluate year-over-year changes in claim costs instead of month-over-month changes. Research has shown that healthcare claims vary by day of the week (typically more claims are generated on a Monday than a Tuesday, etc.) and by the type of day (claims are highest on weekdays, and comparatively lower on weekends and holidays). For example, due to the comparative mix of working days, claim costs are typically higher in October, a month with 31 days and no national holidays, than in November, a month with 30 days and a national holiday for the observance of Thanksgiving.

Monthly claim amounts can also be affected by other factors such as weather and epidemics. However, for the most part, the mix and type of days in a given month have the most influence on the rate of change in healthcare claim costs. Given this variation, in many cases the month-to-month change in healthcare costs may be driven predominantly by the number and mix of days in the month, rather than by absolute changes in claim costs.

### 3. Index History and Analysis

#### Pro-forma History



Source: Standard & Poor's. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The information provided in this chart from January 2003 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

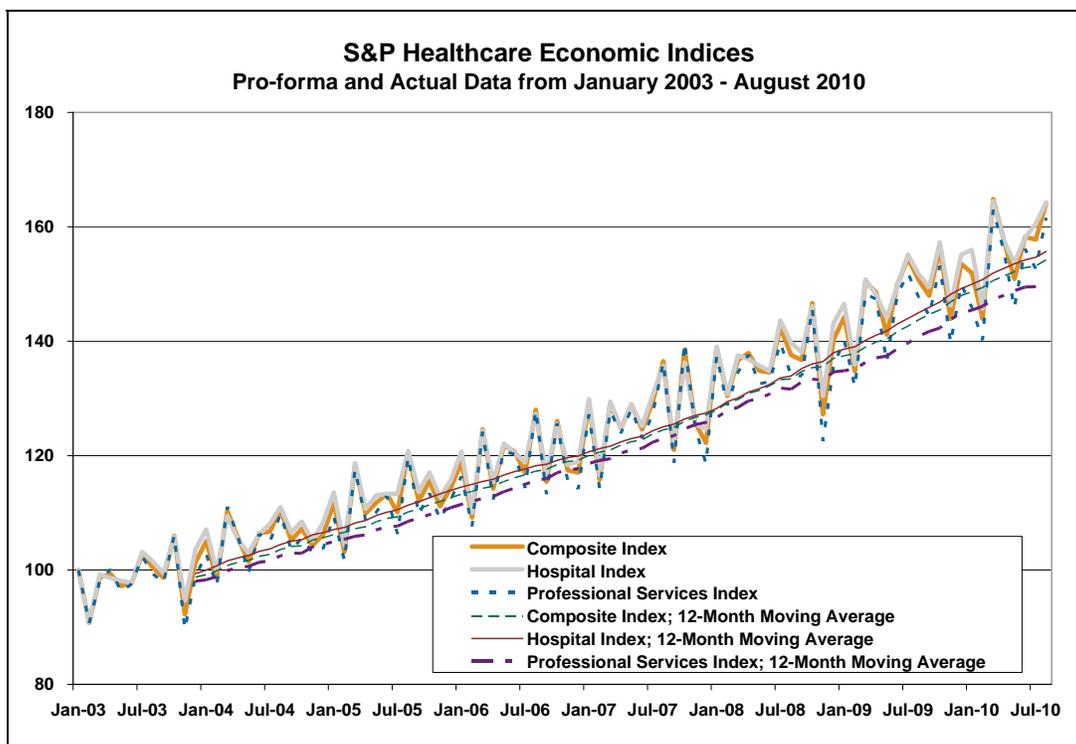
The chart above includes the pro-forma historical time series and 12-month moving averages for the three headline indices: S&P Healthcare Economic Composite Index ("Composite Index"), S&P Healthcare Economic Commercial Index ("Commercial Index") and S&P Healthcare Economic Medicare Index ("Medicare Index"). The jagged movement of the index levels illustrates the monthly variability and seasonal nature of healthcare claim costs due to differences in the number and type of working days in each month, as discussed in the earlier section.

Overall, between January 2003 and August 2010, the Composite Index increased 64%, at a compounded annual growth rate of 6.7%. During the same period, the Commercial Index grew 74% and the Medicare Index rose 48%, at compound annual growth rates of 7.5% and 5.3%, respectively. This difference may be explained in part by the premise that changes in Medicare funding produce a "cost shift" effect on the commercial health insurance market (see Section 1). This cost shift would suggest that healthcare providers may attempt to increase their revenue from patients covered under private, commercial health insurance plans (either through higher prices or increased utilization of services) in order to offset anticipated lower levels of increases in federal and state funding for Medicare and Medicaid.

Another possible explanation for this difference in trends is the belief that employment levels affect per capita commercial claim costs. Historically, during recessions, unemployment rates are often higher for younger people,<sup>14</sup> who typically generate lower healthcare costs than those who are older. In addition, when employees at larger companies are laid-off, federal law mandates that they have the option to purchase extended COBRA coverage. Yet due to the high cost of COBRA premiums, the greater majority of those who choose to pay for these benefits may be those who anticipate the need for significant medical expenses (e.g. pregnancy, pending need for surgery, chronic illness, etc.).

Therefore, during times of higher unemployment, the costs and utilization associated with those people remaining with the commercial insurance plans will tend to increase claim cost trends per insured employee. In turn, when increased hiring returns, a greater number of younger individuals are likely to be covered by commercial health insurance plans. This tends to lower the trend in total allowed claim costs per insured employee since younger insured members don't typically require aggregate services that are as costly as those incurred by the older population.

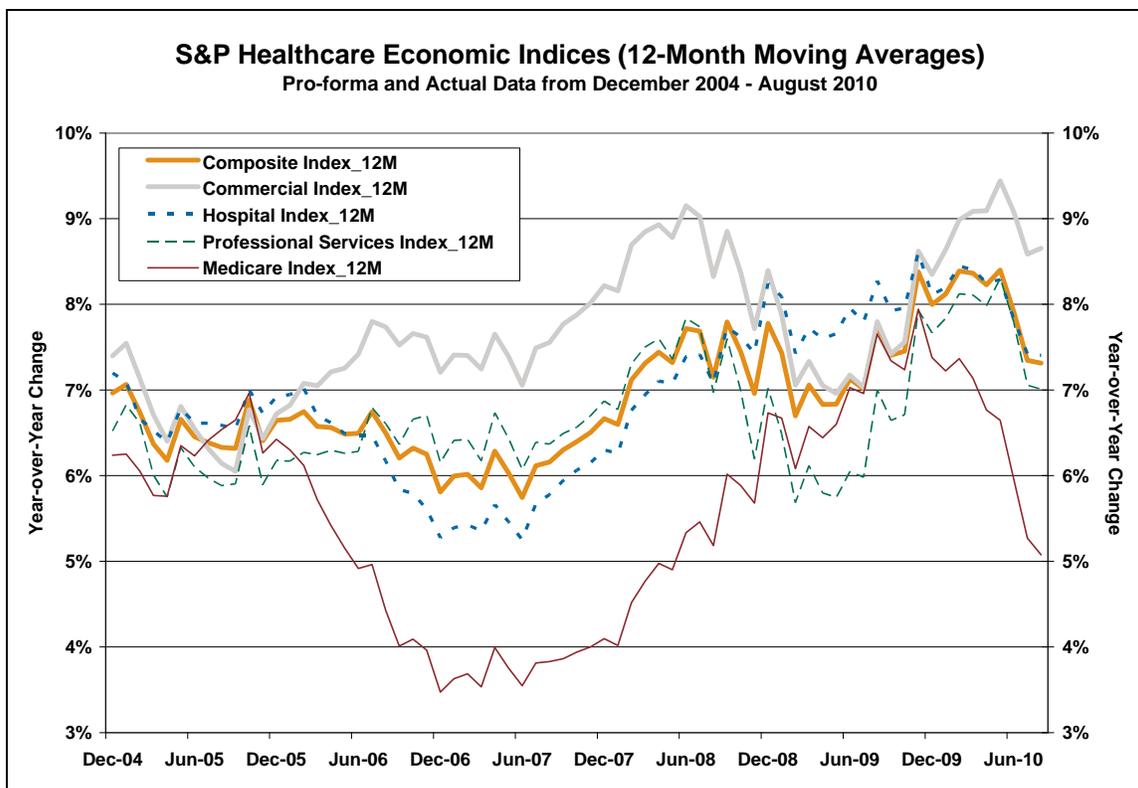
The rate of change in total allowed claims also varies by the type of service provider, yet the difference between these trends is less significant than that between the benefit programs. The chart below shows that as of August 2010, the S&P Healthcare Economic Hospital Index ("Hospital Index") rose 64% since the historical inception of the Indices in January 2003, as compared to 62% for the S&P Healthcare Economic Professional Services Index ("Professional Services Index") in the same period.



Source: Standard & Poor's. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The information provided in this chart from January 2003 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

<sup>14</sup> "Understanding the Economy; Unemployment Among Young Workers." U.S. Congress Joint Economic Committee, May 2010. Web.

Within the healthcare industry, the most frequently employed measure of healthcare claims is the year-over-year comparison of 12-month moving averages. This comparison, illustrated in the chart below, further highlights the variability among the different indices.



Source: Standard & Poor's. This chart shows the year-over-year percent change in the 12-month moving average of the Indices. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The information provided in this chart from December 2004 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

The year-over-year trend for the 12-month moving average of the Medicare Index decreased more dramatically than those of the other Indices in both 2006 and 2010. The biggest factors driving this declining trend in 2006 were the decreasing year-over-year 12-month trends for Medicare fees and malpractice insurance. In 2010, the Medicare trend decline was caused by employment declines across both hospital and professional service providers and by lower Medicare fees for hospitals. The Hospital and Professional Services Indices were more highly correlated throughout the period until late 2008 when the 12-month moving average of the Hospital Index began to increase at a higher rate than that of the Professional Services Index, only to converge in the summer of 2010.

The correlation statistics in the table on the following page, further confirm that the benefit program indices (Medicare and Commercial) are less correlated than the healthcare provider indices (Hospital and Professional Services), with correlations of .80 and .88 respectively. This lower correlation is predominantly linked to the behavior of the Hospital Indices, which in turn reflects the differences in the payment processes between Medicare and commercial plans. The Hospital Medicare and Hospital Commercial Indices only showed a .57 correlation whereas the Professional Services Medicare and Professional Services Commercial Indices showed a .81 correlation during the same period.

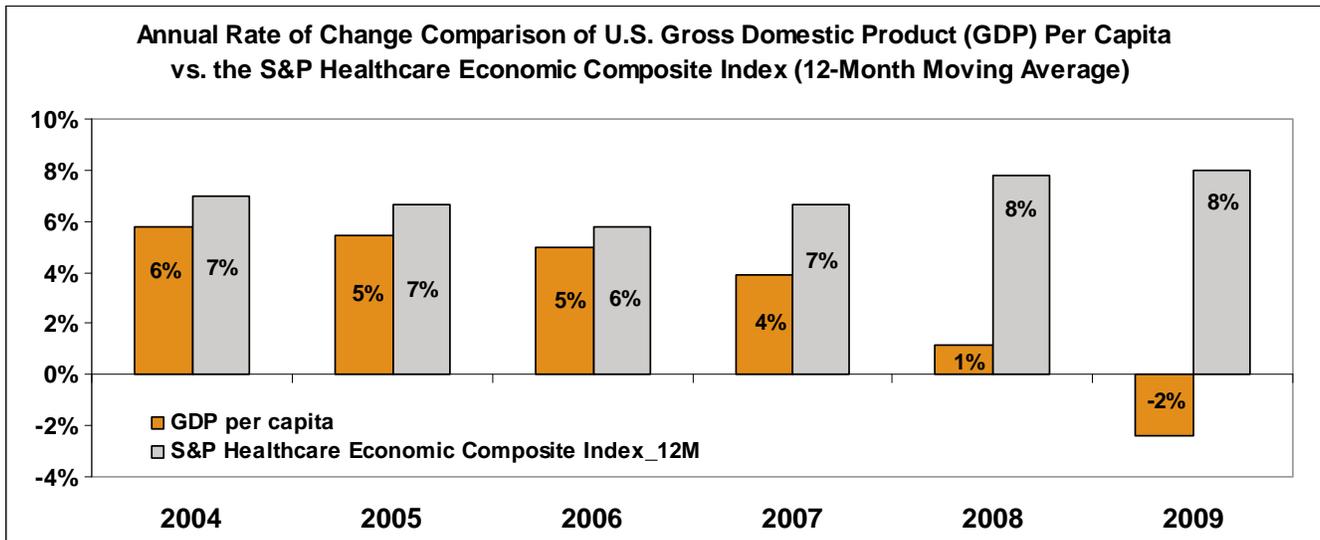
Correlation of Monthly Percent Change in 12-Month Moving Average Index Levels	Composite Index	Medicare Index	Commercial Index	Professional Services Index	Professional Services Medicare Index	Professional Services Commercial Index	Hospital Index	Hospital Medicare Index	Hospital Commercial Index
Composite Index	1.000	0.921	0.969	0.979	0.934	0.939	0.957	0.811	0.880
Medicare Index	0.921	1.000	0.797	0.863	0.941	0.771	0.937	0.950	0.723
Commercial Index	0.969	0.797	1.000	0.972	0.855	0.968	0.894	0.659	0.909
Professional Services Index	0.979	0.863	0.972	1.000	0.911	0.980	0.878	0.728	0.820
Professional Services Medicare Index	0.934	0.941	0.855	0.911	1.000	0.810	0.900	0.788	0.805
Professional Services Commercial Index	0.939	0.771	0.968	0.980	0.810	1.000	0.812	0.653	0.776
Hospital Index	0.957	0.937	0.894	0.878	0.900	0.812	1.000	0.872	0.900
Hospital Medicare Index	0.811	0.950	0.659	0.728	0.788	0.653	0.872	1.000	0.573
Hospital Commercial Index	0.880	0.723	0.909	0.820	0.805	0.776	0.900	0.573	1.000

Source: Standard & Poor's. This chart shows the correlations among the monthly percent changes in the 12-month moving averages of the different Indices from January 2003 through August 2010. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The information provided in this chart from January 2003 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

## Comparative Benchmarks and Analytics

The rate of change in U.S. healthcare claims, as estimated by the S&P Healthcare Economic Indices, provides an interesting point of comparison with other existing economic and healthcare industry measures.

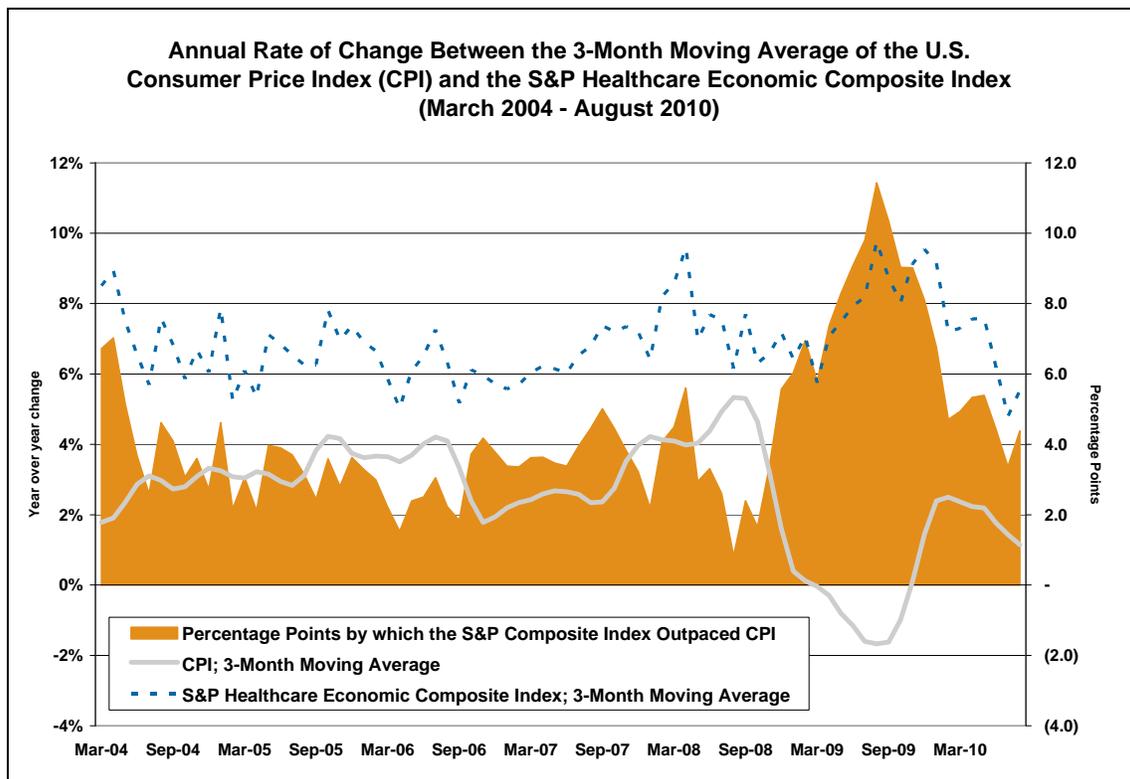
In the chart on the following page, the annual rate of change for the Composite Index consistently outpaced the growth of U.S. GDP per capita over the last five years. As the rate of change in GDP per capita began to diminish in 2007, and GDP declined in 2009, healthcare claims continued to rise, indicating that healthcare expenditures were one of the few categories that rose during the most recent financial crisis. This is not surprising, given that the pricing of commercial healthcare services is typically linked to long-term contracts and, likewise, the funding of public programs are not immediately influenced by short-term economic conditions. Moreover, while marginal demand for healthcare services is impacted by general economic conditions to some extent, a great deal of the demand for healthcare services reflects the need for treatment of serious health conditions, and is not discretionary.



Source: Standard & Poor's with data from the Bureau of Economic Analysis and the US Census Bureau. This chart shows the year-over-year percent change in the 12-month moving average of the Index and GDP per capita. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The S&P Index information provided in this chart from 2004 to 2009 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

As measured by various Consumer Price Index (CPI) indicators, total healthcare expenses have risen at rates above the general inflation rate for the past four decades.<sup>15</sup> On average, since 2004, claims cost trends per capita, as measured by the Composite Index, outpaced CPI by an average of four percentage points.

<sup>15</sup> Source: The Kaiser Family Foundation, Kaiser Fast Facts. Kaiser Family Foundation calculations using NHE data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, at <http://www.cms.hhs.gov/NationalHealthExpendData/> (see Historical; NHE summary including share of GDP, CY 1960-2008; file nhegdp08.zip), and CPI data from Bureau of Labor Statistics at <ftp://ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt> (All Urban Consumers, All Items 1982-1984=100, Not Seasonally Adjusted, U.S. city average).



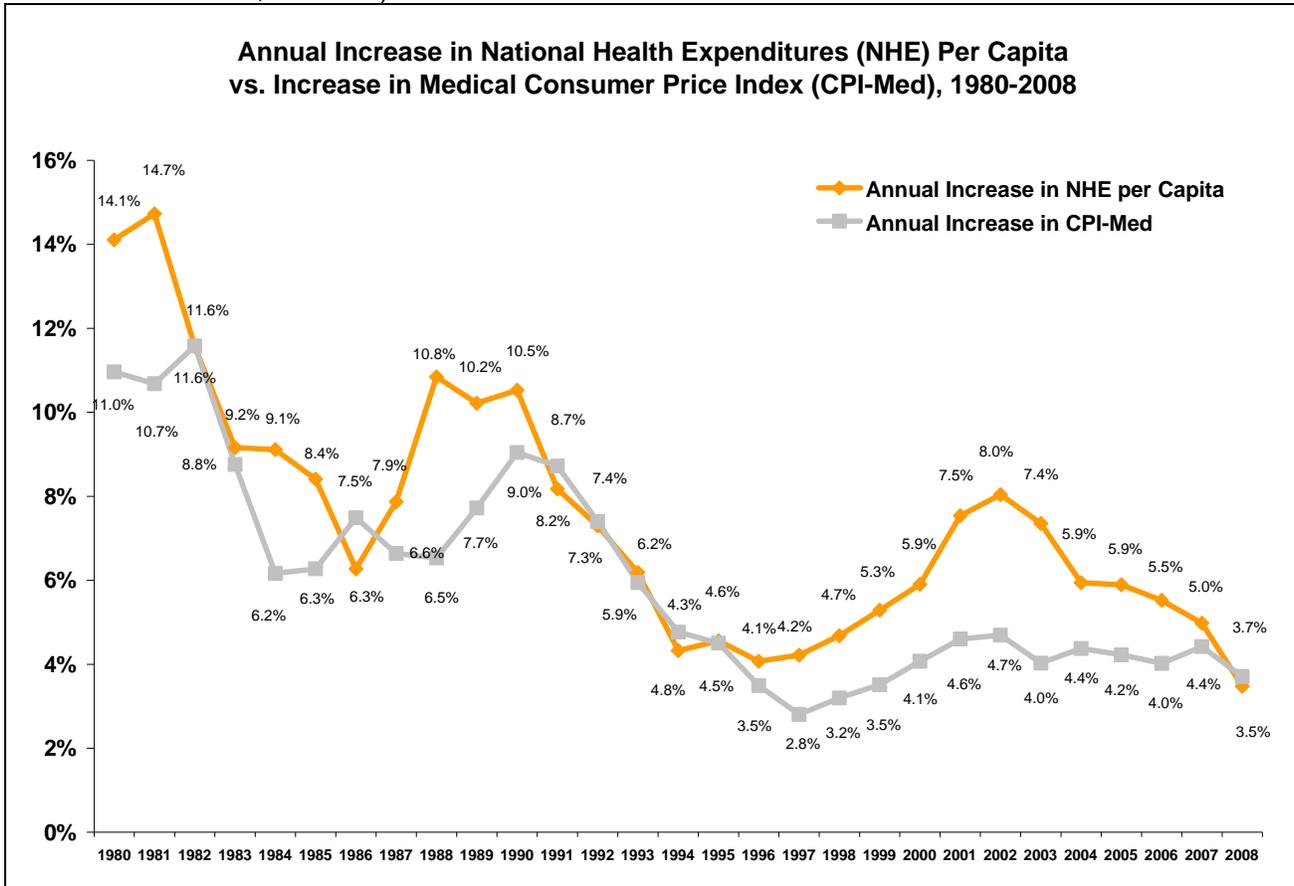
Source: Standard & Poor's with data from Bureau of Labor Statistics. This chart shows the year-over-year percent change in the 3-month moving averages of each index. The data are not inflation adjusted. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The S&P Index information provided in this chart from March 2004 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. S&P Index information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

The Medical Consumer Price Index (CPI-Med) provides another point of comparison. CPI-Med measures inflation at the retail, or consumer level of out-of-pocket household expenses for a “market basket” of healthcare services. However, CPI-Med may understate the true level of healthcare claim cost trends for the following reasons:

- CPI-Med tracks a wide range of healthcare price changes, some of which are not covered under most medical insurance programs (such as over-the-counter drugs, dental, and vision services).
- CPI-Med does not track changes in the utilization or mix across different services. Utilization levels have a significant impact on the total per capita change in expenses for health insurance programs. By not tracking the utilization changes on a timely basis, CPI-Med omits one of the key factors driving healthcare claim cost trends.
- CPI-Med is affected by the impact of market changes in the pricing of healthcare services, such as potential cost-shifting between public (Medicare and Medicaid) and private insurance programs, since all programs are included in the CPI-Med.

As a result, CPI-Med cannot be used as an accurate measure of the total claim cost trends incurred by health insurance programs (public and private) over time. The difference between CPI-Med and NHE data, a measure of total healthcare expenditures, can be found in the chart on the following page. This shows the relationship between the increases in per capita healthcare spending across all categories

(including private insurance programs, public programs such as Medicare and Medicaid, and private out-of-pocket payments), and the average annual increases in general inflation measured by CPI-Med (all urban consumers, all items).

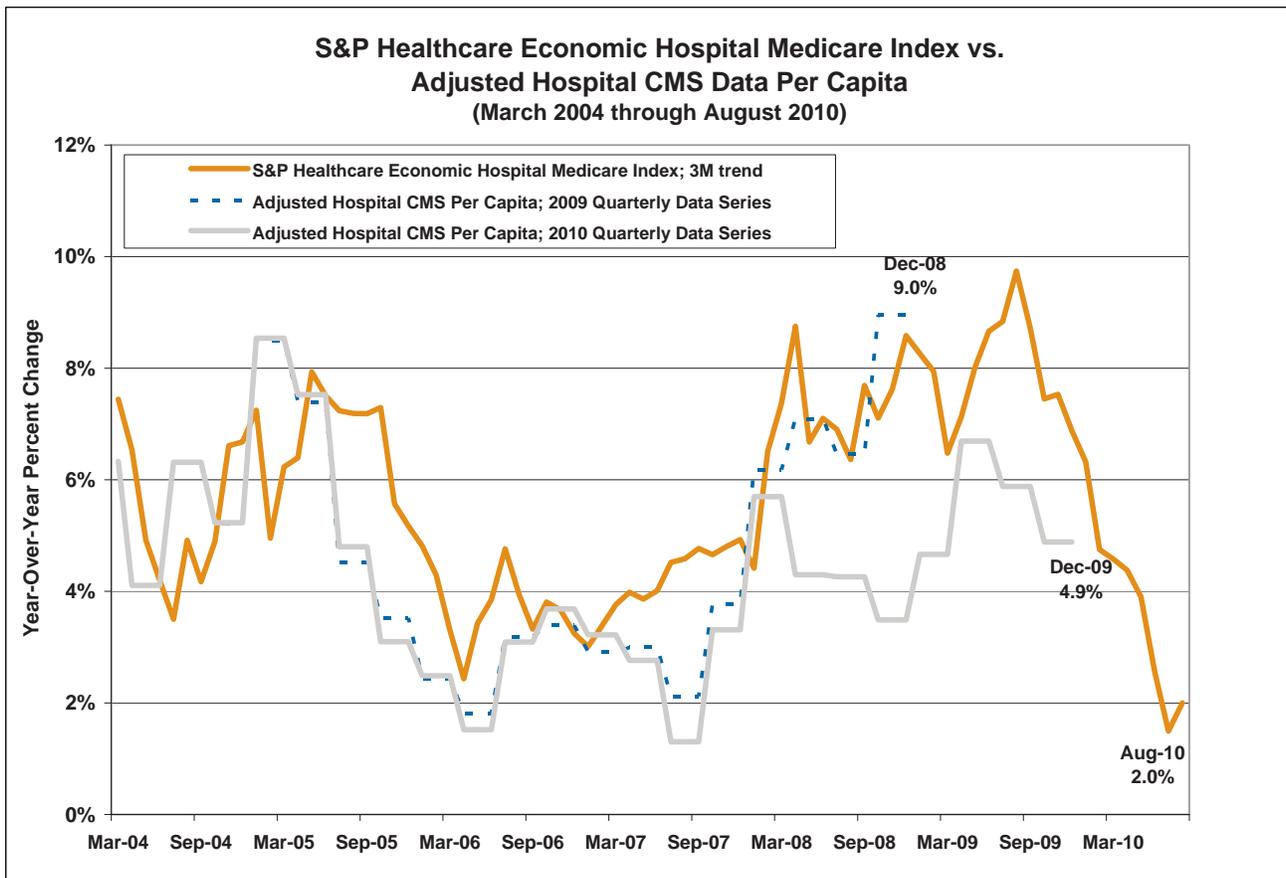


Source: Standard & Poor's using NHE and BLS data.

In order to evaluate the representative value of the Indices, it is also important to see how they compare to other sources of healthcare claims trend data.

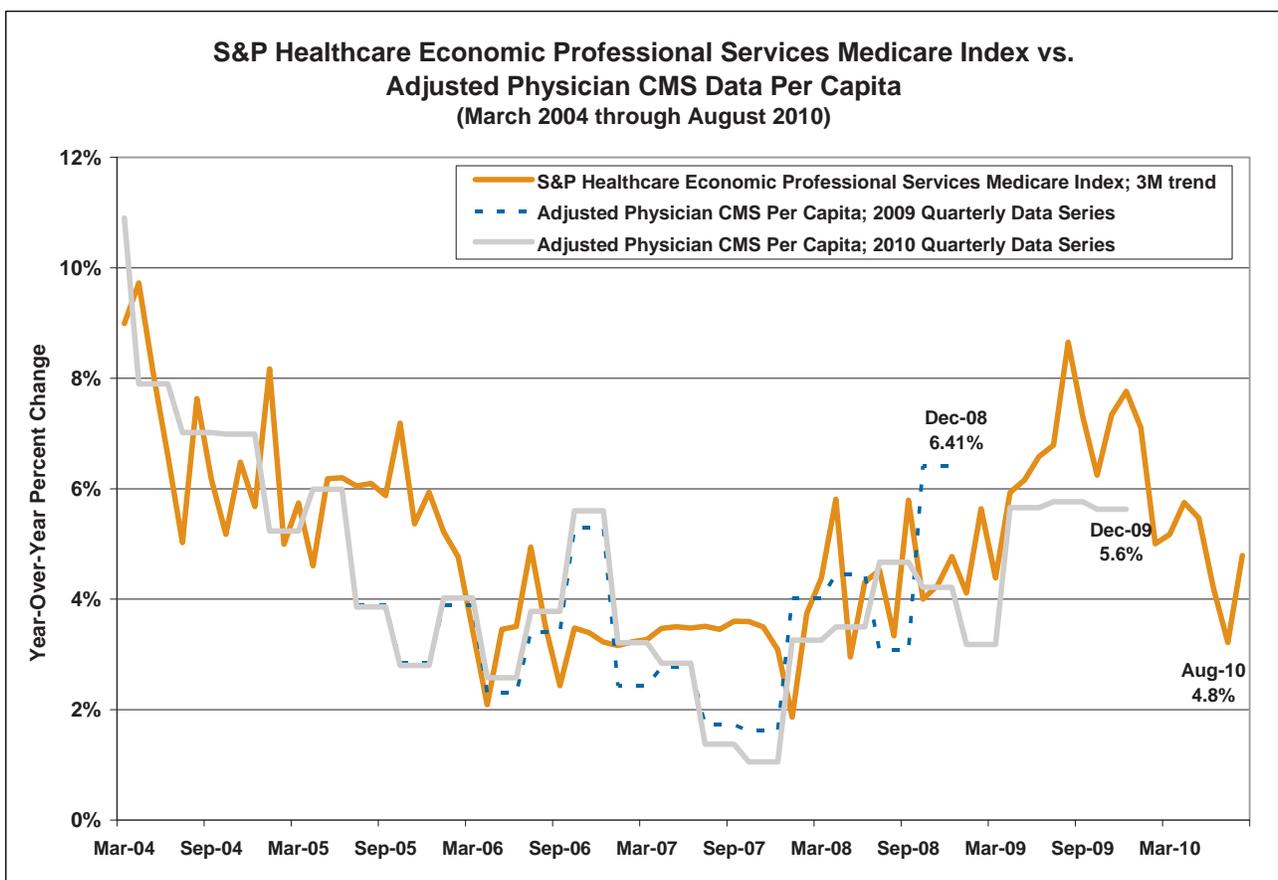
The following two charts compare the Hospital and Professional Services Medicare Indices to adjusted 2009 and 2010 data from the CMS. CMS publishes Medicare reimbursement data each year as a supplement to their annual Trustees' Report which highlights quarterly dollar amounts. The charts on the following page show the three-month moving average trends of the Hospital and Professional Services Medicare Indices as they compare to incurred, quarterly, adjusted CMS claims for hospitals and physicians, respectively. In order to make the CMS Trustees' data comparable to that of the S&P Indices, it was necessary to adjust the Trustees' payment data to include copayments, since unlike the Indices, the Trustees' payment data are on a paid benefit (but incurred), not allowed, basis. This adjustment was implemented by calculating allowed-to-paid adjustment factors using the CMS Medicare 5% Sample data.<sup>16</sup> Moreover, since CMS data is quarterly, the charts on the following page track the CMS quarterly trend as if it were constant for each month in the quarter (e.g. if the CMS data increased 5% in Q1, January, February and March would each show a static 5% trend).

<sup>16</sup> The CMS publishes data sets, referred to as the 5% Sample (Medicare 5% Sample), for inpatient and outpatient services that are based on using a 5% sample of actual Medicare claims.



Source: Standard & Poor's, Health Index Advisers and the CMS. This chart shows the year-over-year percent change in the 3-month moving averages of the Index and the CMS quarterly Medicare hospital reimbursement data. The CMS data has been adjusted by HIA to reflect data that are more comparable to the S&P Index (please see the paragraph above for a further description of this adjustment). The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past Performance is not an indication of future returns. The S&P Index information provided in this chart from March 2004 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. S&P Index information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

In the chart above, the most significant difference between the Hospital Medicare Index and the 2010 series of the CMS data occurred in 2008 when the Hospital Medicare Index trend rose towards 8% as the CMS trend declined to approximately 4%. It is important to note that CMS data are often restated one to two times after the original Trustees' Report, as evidenced by the difference between the 2009 and 2010 data series above. In the first release of the 2008 CMS data (the 2009 data series), the 2008 trend was predominantly on par with the S&P Hospital Medicare Indices. However, when the 2010 data series was published, the 2008 data were restated, producing a trend that was much lower than the prior year's version of the 2008 dataset.



Source: Source: Standard & Poor's, Health Index Advisers and CMS. This chart shows the year-over-year percent change in the 3-month moving averages of the Index and the CMS quarterly Medicare physician reimbursement data. The CMS data has been adjusted by HIA to reflect data that are more comparable to the S&P Index (please see the paragraph above for a further description of this adjustment). The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The S&P Index information provided in this chart from March 2004 through July 2010 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. S&P Index information beginning in August 2010 reflects actual performance, subject to future revisions as discussed in the Performance Disclosure. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

The professional services Medicare trend data above are more similar than the hospital Medicare datasets especially during the 2008 time period. Regardless, given the most recent monthly trends of both the S&P Hospital Medicare and S&P Professional Services Medicare Indices, it would appear that the CMS trends are likely to decline for 2010.

It is more challenging to provide a market comparison for the Commercial Indices due to the absence of a public source of commercial health insurance claims data. HIA had access to a large volume of actual incurred claims data per capita (the claims expense incurred by the insurance program per insured member excluding any copayments or deductibles) from January 2004 through May 2009. Because the incurred claims data is based only on the amount paid by the insurance program, it is impacted by plan coverage factors such as the level of deductibles and participant copayments. The coverage provisions can skew the trend of the payment levels from period to period, in two ways:

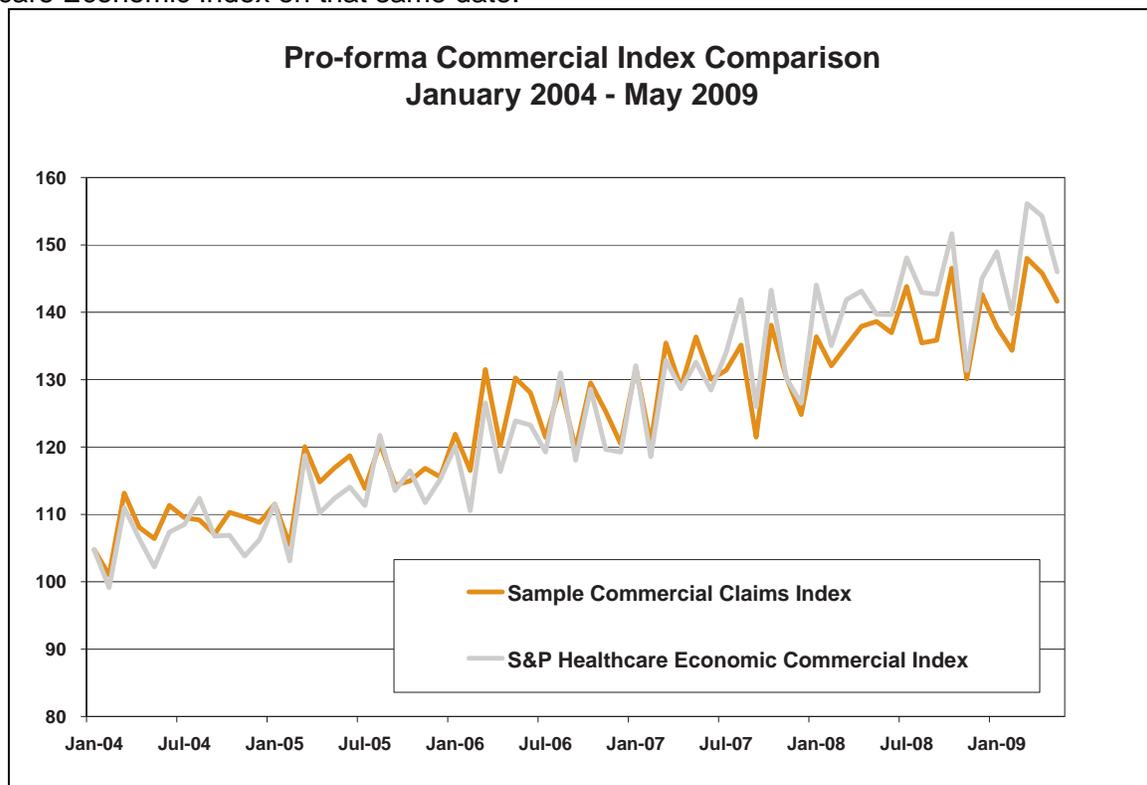
- If there is no change in the coverage provisions, then the average trend of the plan costs should be higher than the level indicated by the Commercial Indices since maintaining fixed participant

payment provisions (deductibles and copayments) will result in the plan paying an increasing percentage of the total claim costs.

- If there is a material change in the coverage provisions for a given employer or contract, there will be a one time change in the level of plan payments at the effective date of the change reflecting the new coverage provisions.

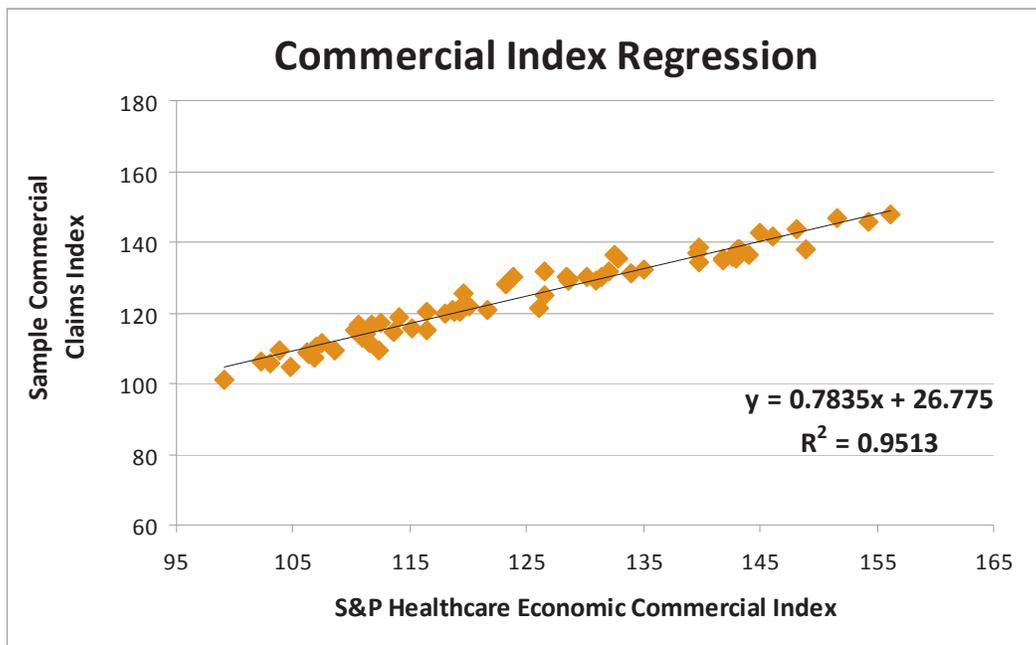
The combination of these two factors will affect the overall reported claim cost trends in aggregate data similar to that shown below.

A comparative “Sample Commercial Claims Index” was created by taking the monthly change in this sample data and applying it to a base of 104.8 on January 2004, which was the level of the S&P Healthcare Economic Index on that same date.



Source: Standard & Poor's and Health Index Advisers. The Sample Commercial Claims Index was calculated by assuming a base value of 104.8 on January 2004, the level of the S&P Healthcare Economic Index on that same date, and applying the monthly rate of change in the sample commercial dataset to the index level for each subsequent month. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The S&P Index information provided in this chart from January 2004 through May 2009 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

The regressions against the monthly index levels for the same period resulted in the following scatter diagram. This figure shows a high R-squared value, indicating that a significant portion of the variability in the sample commercial insurance data can be explained by the S&P Healthcare Economic Commercial Index. The deviations around the fitted line also appear to be random. These results confirm a very strong relationship between the trends estimated by the Commercial Index and the actual change in total incurred claims per capita associated with this sample commercial population.



Source: Standard & Poor's. This chart shows a regression analysis of the Sample Commercial Claims Index and the S&P Healthcare Economic Commercial Index from January 2004 through May 2009. The S&P Healthcare Economic Indices and each of the sub-indices were officially launched on October 21, 2010. Charts and graphs are provided for illustrative purposes only and are based on the most recent information publicly available. Indices are statistical composites and their returns do not include the payment of any sales charges or fees an investor would pay to purchase the securities the indices represent. It is not possible to invest directly in an index. Past performance is not an indication of future returns. The S&P Index information provided in this chart from January 2004 through May 2009 is pro-forma and reflects hypothetical historical performance based on a number of assumptions. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations and assumptions associated with back-tested index performance.

## 4. Potential Applications

The S&P Healthcare Economic Indices seek to bring a new level of transparency into the healthcare market by providing a timely, consistent, third-party benchmark of the trend in U.S. healthcare costs. The Indices should help provide the market with an indication of how quickly claim costs are changing and what variations may exist between the core types of benefit programs -- Medicare and commercial health insurance plans. The financial terms of health insurance plans are continually being negotiated between various healthcare provider systems, health insurance carriers, employer groups, and third-party organizations. Having access to current information on healthcare trends should be valuable to all these organizations as they negotiate multiyear contracts for the delivery and payment of healthcare services.

Healthcare market participants (providers, insurers, employers, etc.) may choose to benchmark their own financial experience to the average national trend indicated by the S&P Healthcare Economic Indices. Given that the Indices are updated on a monthly basis, they can provide healthcare market participants with the first regularly published benchmark against which to track their own financials on a continual and timely basis. Because an individual firm's experience is affected by a wide range of factors, it may be appropriate to make actuarial adjustments to the firm's historical claims experience in order to correct for these types of changes. Such adjustments can be made using traditional actuarial methods.

The Indices may also serve as a tool to provide healthcare market participants with the flexibility to develop a variety of financial products that could be used for speculation or to hedge exposure to per

capita healthcare costs. For example, the Indices could be used as a tool to create financial products which could help manage the long-term cost of health plans.

One such example is using the Indices as the basis for structuring financial performance contracts among third-parties. By using the Indices as a performance benchmark, organizations, including health plans, healthcare systems, and larger self funded employers, could negotiate financial performance contracts linked to the Indices. Self-funded employers, in particular, have long sought a practical way to apply a performance-based fee structure to health plans and healthcare vendors, potentially rewarding those organizations that can demonstrate superior long-term results on the basis of their financial performance.

With the recent enactment of healthcare reform, there are strong incentives for health plans and healthcare organizations to move away from the traditional fee-for-service contracts, and instead, negotiate fixed budget or capitated payment contracts.<sup>17</sup> These types of financial contracts are typically negotiated on a multiyear basis and often take several years before their impact is fully measurable. Because the Indices are updated monthly, and are not tied to a calendar year cycle, they provide a flexible benchmark that can be used to set multiyear performance measures of varying length. This could benefit healthcare management programs which could use the Indices as a comparative benchmark for their program's success, according to whatever timeframe is most appropriate.

Moreover, while a market to hedge against future healthcare cost trends does not yet exist, one may develop in the future. The S&P Healthcare Economic Indices have been designed to meet the needs of financial markets. For instance, an employer or health plan may want to hedge against the possibility that healthcare trends exceed a stated rate over a specific time-period (e.g. no more than 15% over the next two years). Using standard measures found in existing futures and options contracts, banks, hedge funds, or insurance or reinsurance carriers could offer to write protection against the possibility that the index level exceeds that pre-determined amount. Likewise, healthcare systems could hedge against the possibility that claim cost trends fall below a specified level.

In essence, all types of organizations may find it advantageous to use the Indices as the basis for a hedge, or as means to negotiate a contract that would cover the risk that future healthcare trends move above or below the S&P Indices by a specified amount. Employers, banks, and health plans would have a wide range of flexibility to structure such contracts.

## Conclusion

Despite the fact that healthcare expenditures account for over 16% of U.S. GDP, there are no current measures that allow organizations to track healthcare claim cost trends for the Medicare and commercial health insurance populations on a regular basis. The S&P Healthcare Economic Indices have introduced a new benchmark by which the U.S. healthcare market, government, and general public can better monitor trends in healthcare costs, and use this information to improve their ability to manage the long-term cost of health insurance programs.

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<sup>17</sup> A capitated payment contract establishes a fixed monthly payment per insured member (referred to as a per member per month payment) to compensate the healthcare provider for the services covered by the capitation agreement.

## Additional Resources

[S&P Healthcare Economic Indices](#)

S&P Indices Thought Leadership: [www.indexresearch.standardandpoors.com](http://www.indexresearch.standardandpoors.com)

S&P Indices Market Attributes®: [www.marketattributes.standardandpoors.com](http://www.marketattributes.standardandpoors.com)

## Stay Connected



## Performance Disclosure

Indices are not collective investment funds. It is not possible to invest directly in an S&P index. Past performance of an index is not an indication of future results.

The S&P Healthcare Economic Indices, are the result of the collaboration between Standard & Poor's and Health Index Advisors ("HIA"), a joint venture between Aon Hewitt and Milliman Inc. The Indices seek to reflect the per capita change in total allowed claim costs incurred by patients, through their co-payments, and healthcare benefit programs, for services rendered by hospitals and physicians. There are currently no index-based investable products that have been licensed by S&P.

The S&P Healthcare Economic Indices (including all sub-indices) were officially launched on October 21, 2010. Information provided from January 2003 through July 2010 is pro-forma and reflects hypothetical historical performance. Information beginning in August 2010 reflects actual performance, subject to possible future revisions. The pro-forma data were calculated using the same methodology that was used upon the launch of the Index on October 21, 2010. Each of these indices is calculated on a monthly basis using the most recent statistics provided by various Governmental agencies as well as proprietary data sources. Historical data may be restated because the calculation model incorporates data from several Governmental sources, and such data are often restated by the government as new information is received.

For charts referencing the 12-month moving average of the indices, the year-over-year change in the value of the Indices was calculated between the two rolling averages as described in the specific chart. For this reason, while the history dates back to January 2003, the first data point depicted in the 12-Month Moving Average, Year-over-Year Percent Change chart is for December 2004, which is the comparative change between the 12-Month Moving Average for Dec 2004 and the 12-Month Moving Average for Dec 2003. This analysis is somewhat typical for the healthcare industry due to the seasonality of data.

For charts referencing the 3-month moving average, the year-over-year change was calculated between the two rolling averages as described in the specific chart. For this reason, while the history dates back to January 2003, the first data point depicted is for March 2004, which is the comparative change between the 3-Month Moving Average for March 2004 and the 3-Month Moving Average for March 2003. This analysis is somewhat typical for the healthcare industry due to the seasonality of data.

Prospective application of the methodologies used to construct the indices may not result in performance commensurate with the back-test returns shown. The back-test periods do not necessarily correspond to the entire available history of the indexes. The indices are rules based, although the Index Committee reserves the right to exercise discretion, when necessary. It is not possible to invest directly in an S&P index. A year-over-year comparison of any one month's index level indicates the percent by which the monthly amount of healthcare claims changed for that particular month. For example, if the December 2008 and 2009 index levels were 150 and 175 respectively, the year-over-year trend would indicate that the cost of healthcare claims incurred in the month of December increased by 16.7% between 2008 and 2009. The year to year analysis may be useful due to seasonality and annual variability of healthcare costs. Seasonality and monthly changes affect the healthcare data because claims generated are often affected by the day of the week being reviewed as well as the number of days in any particular month. Please refer to the methodology papers for all indices, available at [www.standardandpoors.com](http://www.standardandpoors.com) for more details about the indices, including the manner in which they are rebalanced, and the timing of such rebalancing, criteria for additions and deletions and index calculation.

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