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"For Professional Recognition of the Health Actuary"

An Actuarial Response to the Health-Care Crisis

by Dan Wolak

First of a two-part series

The June 23, 2003 issue of Business Insurance *asked four simple questions to a group of 100 individuals, including just one actuary, who are involved with health care. The questions were:*

1. Who's to blame for cost increases?
2. What should be the government's role to ensure health care coverage and keep costs down?
3. What are the most important steps that can be taken to control costs?
4. How will health care plan design change in the future?

Kara Clark, staff fellow supporting the Health Practice area at the SOA, suggested that we present similar questions to a panel of health actuaries. I worked with Kara and Sue Martz of the SOA staff to do so. The results of our project follow.

The following manuscript includes the responses of approximately 20 actuaries who participated in this survey. Please note that these comments are individual opinions and do not reflect the opinions of the respondents' employers.

In some cases, I have presented the participant with a follow-up question based on their responses. To have the final responses fit within the confines of this newsletter, some individual responses were shortened to only one or two paragraphs. If you would like to see the entire transcript, please go to the SOA Web site at www.soa.org.

Responses to the first two questions are included in this issue. The last two will be addressed in a subsequent issue of Health Section News.

We hope that you find the following discussion interesting and thought-provoking. Thanks again to those who took the time to respond to the survey questions.

Dan Wolak, FSA
Senior Vice President
Gen Re LifeHealth

NOTE: These responses were solicited prior to the Medicare changes being finalized.

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1. Who is responsible for the level of health care cost increases?

Howard Bolnick, FSA

We all are! Our societal ethic strongly supports scientific research, medical technology, the belief that illness can be "conquered" and the "right" of each of us to access virtually unrestricted medical care. As long as we believe in the value of and demand access to all the care we need and want, then health care costs will continue to increase faster than general inflation.

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John Cookson, FSA

We all are. We have a system that was set up based on a fee-for-service reimbursement. The system has no requirements that treatments be effective or of high quality. Continuing reductions in the proportion of direct claims related out-of-pocket provider payments immunize the consumers against having to make choices based on quality, cost and effectiveness. Treatments and plans are so complicated, and billing for services is so complex that it is almost impossible for anyone to know the cost of a particular course of treatment in advance. And good information on quality and effectiveness of providers is generally not available.

Dale Yamamoto, FSA

Everyone is responsible for current levels of health care cost increases. The government is responsible for shifting more costs to private payers via lower reimbursements to public programs, employers for providing overly rich benefit plans, consultants for continually making changes to the system that few understand and consumers, for not paying attention to costs.

- Wolak: In regard to the "consultants" you are referring to, do these include actuarial consultants? If yes, where have they gone wrong? If not actuaries, how can actuaries help the situation?
- Yamamoto: Some of the consultants are actuaries, but many are not. However, most of the consultants were at least supported by actuaries in some fashion to help employers understand the costs of the programs. In many ways, the economics of health care are simple: you have a price for a service, and the final cost is driven by how much each service is used, but the types of services are constantly changing because of technology, consumer demand and other factors. The utilization of services changes depending on many factors, too (e.g., benefit design, consumer income, advertising). Actuaries can be blamed partly because we understand the cost influences on health care but have not been vocal in the larger health policy debate in making this market segment react similarly to other economic markets.

David V. Axene, FSA

No single party is to blame. This is a collective problem that needs a multi-faceted solution. Through all of this I often refer to the tension between FSI (financial self interest) and greed. This is a little philosophical, but clearly applicable. I refer to a G-line (where financial self interest ends and greed begins). I am convinced that our real problems in the health care system begin when people cross the G-line (e.g., they want more benefits, compensation, profits, etc., than they deserve). When this happens we have problems, and we definitely have problems.

- Wolak: The easy (and likely, correct) answer is to say all are responsible. But if you have only one party, who is it?
- Axene: Well I assume you are saying, "If I am pinned to the wall and can only say one, even though I know it is not just one, I have to go with those paying for services (i.e., health plan or plan sponsor). They hold the keys. Behavior follows money, so I would go there. A close second would be the covered individuals."

Van A. Jones, FSA

In the words of Walt Kelley, "We have met the enemy, and he is us!" Theoretically it is conceivable that an answer could be found to the question, "who is most responsible THIS MONTH for increasing the cost of health care?" In the end, the guilty party might accept guilt for the month, but justify it on the basis that their guilt was driven by the guilty party from the prior month.

Michael G. Sturm, FSA

Everyone. We all want the latest technology and "best" health care, but don't want to pay for it. We complain about the costs, but continually vote down legislation that rations health care. I believe spending more on health care as our wealth increases is a natural phenomenon. There is, and has been for some time, a fundamental shift occurring in how we spend our money. The American public is (sub)consciously spending more on health care as we achieve satiety in non-health-care-related goods. We probably will still complain about health-care costs in 30 years when health-care spending will likely be closer to 25 percent of our gross domestic product (GDP) (vs. about 15 percent today). Until we conquer death, expect increasing premiums caused by an innate demand for "the cure de jour."

William F. Bluhm, FSA

Franklin Roosevelt [is responsible] and his tax code that made employee benefits tax deductible.

Cynthia S. Miller, FSA

It is counterproductive to attempt to place blame for the level of health-care inflation. All constituents in the health-care system have played a role in the increases in U.S. health care consumption. However, I believe that one of the primary factors is the disintermediation of the health care consumer from the costs of the services that they receive.

Mark E. Litow, FSA

Everyone [is responsible], that means government, insurers, providers, suppliers, etc. What should be the government's role to ensure health-care coverage and keep costs down? They should set the laws, enforce them and provide subsidies to people in need for a transitional period if they are capable of helping themselves and provide subsidies permanently if they are not capable of helping themselves. They should not be a provider and only an insurer where no other alternative is available. Otherwise, they end up regulating themselves.

Craig S. Kalman, FSA

I'd like to answer this a little differently, but instead of asking "who" [is responsible] ask "what"... I also think the answers involve the question, "What is responsible for the level of health care costs (both in value and their increases vs. just the increases)?" The cause of this ties heavily to several facets:

- Access to health care is often tied to access to health insurance coverage (note: this includes self-funded even though it's not "insured").
- The costs for providing health insurance coverage are typically paid by a third party—such as an employer or Medicare. As a result of these, people don't have a perceived value of the real cost of their health care.
- Billings from health care providers are listed as an "original price" and don't necessarily reflect the final cost—such as discount arrangements via managed care or Medicare. Often the only one paying this "original price," is one who has no insurance coverage. There may be little relationship between the "negotiated price" for a given procedure and the "original price," and even then, there is little knowledge of the overall "average final price" to account for the variations in the "negotiated price" and varying levels of "cost shifting."
- With more and more people under managed care, there become less people to receive the "cost shifting."

David R. Nelson, FSA

In one sense, we are all responsible for the level of health care cost increases. When faced with a medical emergency, we all want the best health care possible for our loved ones, without regard to cost. And, it's not just Americans who view health care as a precious good. Every society spends more on health care, if they have the income to do so. There are, however, many factors that contribute to complicated and costly medical activity irrespective of health:

- Physicians practice medicine based on what they learned at medical school or on geographic preferences, as opposed to evidence-based medicine or best practice.
- Patients with first-dollar insurance coverage often take routine concerns to the emergency room or otherwise waste health-care resources.
- Hospitals compete with each other for physician referrals, and in the process, acquire redundant and costly medical technology.
- Pharmaceutical companies spend billions of dollars to promote the use of branded drugs that offer no clinical benefit over generics.
- Payers and providers employ computer systems that do not talk to each other.
- Government mandates coverage that does not contribute to health.
- Government allows litigation that necessitates the practice of defensive medicine and makes it difficult for providers to admit mistakes and discuss improvement efforts with their peers.

Finally, it should be noted that some health cost increases are very consistent with good practices. As the average age of our population increases, our costs increase. Moreover, good medicine keeps sick people alive. Therefore, there are more sick people in the population. This is particularly true because most medical technology improves quality of life, but does not cure those with chronic illnesses.

Carl Desrochers, FSA

The health-care industry is an extremely dynamic environment. There are a lot of market forces that drive the health-care cost increases. Two of them are:

(1) **Malpractice lawsuits:** The practice of medicine has become extremely litigious and costly in recent years. Numerous lawsuits have been filed and some of them have resulted in large non-economic damage awards. The non-economic part of a lawsuit settlement has become a "lottery" award. According to the *Jury Verdict Research, Current*

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Awards Trends in Personal Injury: 2002 ed., the median medical liability cases jumped 176 percent from 1994 to 2001, topping $1,000,000, while the average award reached $3,900,000 in 2001.

The effects that those large settlements have on health-care costs are pervasive. One effect is that physicians will be charged much higher malpractice liability insurance which will be passed on to the health care user or they will simply exit the profession because of the high risk of litigation, which will reduce the supply of physicians. Another effect is that liability and risk of lawsuits are forcing the physicians to perform "defensive medicine." They are forced to order more diagnostic tests to document that they made the right diagnosis and didn't overlook anything.

- Wolak: Are you suggesting two aspects of cost, one being the cost for malpractice insurance, the second being additional tests? Does this also force doctors to follow a certain protocol?
- Desrochers: In summary, I believe each doctor is following a certain protocol, but the protocol is not standardized nor is it cost conscious, which drives up the costs of health care. To determine the appropriate protocol, one would need a large study to gain statistical credibility. Since the health-care environment is extremely dynamic, a new technology and/or research will be available by the time the protocol has been studied.

(2) **Medicare/Medicaid:** The federal programs—Medicare and Medicaid—cover a large proportion of the population. Their reimbursement schedules through Resource-Based Relative Value Schedule (RBRVS) are generating payments that are not in line with the amounts the providers deem necessary to meet their income needs. The providers must then recoup the lost income from the Medicare/Medicaid reimbursements by charging higher amounts to their other clients. This phenomenon is called "cost shifting." As the baby-boomer generation will reach the Medicare age in the next 15 years, the cost-shifting problem will only intensify.

Chandler Lincoln, ASA

We are all responsible for the level of health care cost increases.

The ultimate driver of health-care costs is health-care claims, and we all contribute to those claims. Most claims are unavoidable and uncontrollable, but as a free people we sometimes don't do all we can to avoid costs. With all the cigarettes we smoke, with all the greasy french fries we eat, with all the alcohol we consume and with all the risks we take, we add to those unavoidable claim costs, and as we age, those costs increase.

As consumers we have demanded the right to have greater access to providers within our health plans. In response, health plans have offered greater access, thereby reducing their control and allowing providers (hospitals and physicians) to require a greater reimbursement for their services.

Partially responsible for the increase is the consolidation of health plans. This has resulted in less competition and a higher price for the plans that have survived. Also, because of a fear of returning to the unprofitable period of the late '90s there has been less new competition since health plans have been unwilling to reduce prices to achieve market share.

Timothy K. Robinson, FSA

Insurance programs have generally not been designed to encourage effective identification and management of key health care cost drivers (e.g. chronic and catastrophic disease). With a focus on claims payment and cost shifting, cost control has been equated with transfer of risk (and/or reduction in payment rates) to medical providers, and member cost sharing as the key component of plan design. Providers have rarely been given the support necessary to understand and manage their risk in the forms of relevant and timely data, complementary and efficient case management expertise, and risk-adjusted payment rates. Insurance programs have tracked basic preventive measures and assigned generalist case managers to complex chronic and catastrophic cases, rather than developing effective medical management programs. Disease management companies are now stepping in to fill this void, but insurance programs are hesitant pending savings that can somehow be "proven."

- Wolak: As actuaries, we can be frustrated that the medical profession has not followed consistent protocols. Do the medical providers really want to be given support to manage the risk? Is it something that can really be expected?
- Robinson: A problem is that the expectations of the medical providers have probably been set too low by the health plans in terms of the quality and utility of the data that is typically provided. Medical providers probably don't want more of the same—retrospective summaries of actual claim costs versus capitation payments, or stacks of "canned" reports with no explanation – because they provide no information as to what worked or didn't work, or the patients on which to focus in the future, etc. When health plans start taking advantage of diagnosis-based predictive modeling technology and develop

reports for their providers (as well as their actuaries and underwriters) that detail expected resource utilization at the patient level (sorted by disease state and severity level), they can offer information that is truly useful to the providers as well as various case management personnel or vendors. This can be expected because the technology already exists, and I believe providers would want the support as long as it was properly demonstrated.

David M. Tuomala, FSA

Clearly all participants in the health-care system play a role in the level of cost increases: patients, providers, and third-party payers (both public and private). However, I believe that the nature of the system itself is one of the key reasons that health-care costs continue to increase at a faster rate than other parts of the economy. It should not be surprising that a third party payment system where both the end-user (patient) and the supplier (provider) are insulated from the economic ramifications of their decisions, leads to an inflationary outcome. That form of payment system is likely to lead to both oversupply and overdemand for services since neither side has a strong incentive to reduce the amount of services received or provided.

Health care includes many noneconomic checks and balances on both supply and demand that help to mask these purely economic considerations. Most patients would probably prefer not to receive unnecessary services, and most providers would probably not intentionally supply them. There are also time, convenience, potential discomfort and other considerations involved. However, there are certainly many gray areas in medical practice that leave considerable room for overdemand by patients or oversupply by providers. The recent rapid growth in prescription drug spending is an example of where these natural barriers may be lower than for other types of services.

The prevalence of the third-party payment system in health care may also constrain potential innovations in care delivery. In most industries, technological advances and other forms of increased efficiency tend to produce downward pressure on prices over time. In health care, competitive forces do not operate in the same way because the providers are typically paid the same amount for a given service regardless of how efficient they are. This creates an incentive to provide more services, rather than provide the same services more cheaply or more efficiently. Because unit costs stay the same or increase over time, this further adds to the inflationary pressure in health care.

While other external factors, such as population demographics, technology, etc., also play a key role in health care cost increases, I believe the effect of the third-party payment system itself is often overlooked.

2. What should be the government's role to ensure health-care coverage and keep costs down?

Howard Bolnick:

Over the years I have developed a strong belief that government does have a significant role to play in assuring access to health care to all citizens and also to help control costs. However, our social norms, political ideology and political system make it virtually impossible for the U.S. government to adequately do what it could and should to solve these problems. Without sweeping reform, government can only nip away at the fringes of our serious problems of access and cost.

- Wolak: When you say the norms, ideology, and system of the U.S. government makes it virtually impossible, are you referring to the United States per se, or is this an issue for all governments?
- Bolnick: Social norms and political ideology are not government attributes, they're characteristics of the people who live and work in the United States. Every country has its own unique set of social norms, political ideology and political system, which results in a unique health-care system with its own unique problems.

John Cookson:

I believe the most effective role that the government can play right now is to foster the development of information on the cost, quality and efficacy of specific treatments and individual providers. This could allow carriers to design plans that reflect these factors and compete in an environment of enhanced knowledge. Data quality, access and ability to pool information would all be important ingredients.

Dale Yamamoto:

I don't think we want a nationalized system like almost everyone else in the world. However, I do think it will take government intervention to allow the price transparency and quality efforts that everyone is searching for to actually happen. We

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need some big push to make hospitals and physicians report the data, and we probably need a national warehouse to store it so that everyone has access to the same data. If we rely on private companies to do it, the data will by necessity be split up because of competition and it won't benefit any of us. Given that this data must be uniform across the country, it has to be a federal effort and not pushed down to the states.

David Axene:

The government's role should be no more than overseer of the system. No government-sponsored system in any of the developed countries has been able to accomplish what we expect (low cost, wide access, high quality, etc.). Medicare has resulted in inefficient care even though there are discounts. Medicaid has also resulted in this with even greater discounts. These two approaches show that cutting prices per service doesn't automatically result in lower overall prices, so price controls will likely not work well. The Canadian system has deep discounts and it is struggling with its cost effectiveness and trends as are many other national systems.

Van Jones:

The federal government's role should include maintaining a level playing field for supply-and-demand economics. Consistent with this role are the roles of encouraging and rewarding individual responsibility and the freedom of choice. Inconsistent with those roles but equally important is the need to provide a safety net for the needy and to safeguard the security and financial well being of the masses. Two additional conflicting objectives include minimizing the government's role as a market competitor and minimizing transfer payments that tax the higher economic entities in order to support the lower economic entities.

For discussion purposes, I would suggest that a hospital may find that its economic cost of providing care might be 50 percent of its billed charge. For Medicaid patients, the hospital may receive 30 percent of billed charges and 40 percent of billed charges for Medicare patients. Local large employers may have negotiated a rate of 60 percent of the billed charges, while other managed care plans may have contracted to pay 70 percent of billed charges. The remaining "private pay" patients will be asked to pay the billed charges. Although since many "private pay" patients are the uninsured poor, the hospital's collection rate may be half the amount billed.

This sample hospital may find that 10 percent of its patients have Medicaid, 40 percent have Medicare, 10 percent are from the local large employer, 30 percent are with managed care plans and 10 percent are private pay (half with no financial resources). On the average, the hospital is collecting 51 percent of billed charges. Collecting 51 percent when their cost is 50 percent leaves the hospital with a small profit. This hospital is financially viable as long as this mix and payment structure remains constant. However, no one above is paying a price equal to the 51 percent value of the services provided. This current system as a whole is fraught with inequities.

David Nelson:

Without cost control, there will be no way for employers to provide health insurance or for government to pay for safety-net care. To lower costs, one approach the government should consider is severely limiting direct-to-consumer advertising of medical services and branded drugs.

- Wolak: On the other hand, this is restraint of competition, something that may not be wise. Comments?
- Nelson: Restraint of true competition would be a problem, but we don't have true competition in health care. In a normal free market the person who uses the service pays for it. In health care, patients and providers use the service for which employers and the government pay. Direct-to-consumer advertising, along with third party payment, can create demand for service that is not cost effective. For example, after seeing an advertisement, a patient may ask for a branded drug rather than the chemically equivalent generic drug. The doctor writes the prescriptions for fear of losing the patient. There are two solutions to this problem: either we make the patient responsible for the cost of the more expensive drug, or we limit direct-to-consumer advertising.

Mike Sturm:

To ensure health care coverage, we (i.e., the government) should provide a graded scale of tax credits for purchase of health care insurance to deserving individuals. Some might argue that all Americans can get health care (since laws and ethics prevent providers from turning away the poor). However, it is my opinion that people without insurance get significantly less access to quality health care than those with insurance, and society should provide these people with the same health care as the rest of us.

- Wolak: But isn't this still true in countries where

there is national health care? Doesn't a two-tier system develop?

- Sturm: I am not proposing a national health-care system. I am proposing we help poor people purchase individual health insurance (through a reallocation of government spending or increased taxes). I believe our nation is sufficiently wealthy to ensure all its population has equal access to health care.

Carl Desrochers:

The "single-payer" approach is growing in popularity but should not be considered by the government. The health care system from Canada should teach us lessons regarding the single-payer system.

The Canadian system, which has much social and political appeal, is providing universal coverage to Canadian citizens. However, the physicians have a procedure book and the specific reimbursement for each procedure is determined by the government. In order to remain within their budget, the Canadian government also imposes caps on the physician's total annual compensation. This leads to accessibility problems as physicians that have reached their maximum compensation for the year will not practice medicine until the following calendar year, when they will start getting compensation for their services. Tight budgets in hospitals also lead to lack of technology (MRI machines are few and far between).

- Wolak: Isn't the procedure book in Canada just a set of clear operating practices and standards?
- Desrochers: I was talking more about a procedure book like the CPT, a "catalog" of the procedures and their associated payment from the government. (Note that I'm talking specifically about the health-care system in the province of Quebec to which I was exposed earlier in my career, but I believe the rest of the Canadian system works the same way.) I don't believe there's anything that prevents doctors from running tests as everything is covered. There's no book with a set of rules or steps to follow. The limits are set by the government's annual budget (which is always busted), physician's income cap and other limited resources of the Canadian health-care system rather than by a given procedure book.

Craig Kalman:

- Various regulations have assisted in allowing people who have insurance coverage keep it (e.g., COBRA and HIPAA).
- Regulations that prohibit the use of "non-duplication of benefits" in favor of "coordination of benefits" adds to the problem by removing cost sharing when there are multiple coverages (e.g. both spouses or both parents).
- Improvement in the way employers cover part-time employees (e.g. if one works a x percent work week, let that person get x percent of the employer's contribution for full-time employees).
- Give incentives for people who are "in the system" to stay "in the system" and make it more cost prohibitive for someone to get into the system at a later time (while allowing a one-time "get in" for those not in the system).
- The current government systems—Medicare and Medicaid—already contribute heavily to the cost shifting.
- The Medicare system offers only partial coverage, which means that those covered under Medicare have to supplement their coverage (either on their own or via retiree medical from an employer) to cover those gaps, or bear more claims themselves.
- In the late 1980s under the Medicare Catastrophic Coverage Act, it created a more expansive coverage under Medicare. Instead of it being covered via the Medicare payroll tax, its costs were borne over the Medicare population on an income tax basis. While the actual average per person cost was reasonable, with more of the costs being borne by higher income elderly, there was a quick repeal of this Act.
- There is not perfect timing between the increases in the cost of health care and the increases in the costs of health insurance. There are also marketing-underwriting cycles for insurance.

Bill Bluhm:

What "should" the government do? One of my favorite folk singers (David Roth) has a song entitled, "Don't should on me and I won't should on you." This question is a personal one, requiring me to provide a personal value judgment, not a professional one. This is often misunderstood. I don't choose to answer it; my opinion should have no more validity than that of any other knowledgeable citizen.

Cindy Miller:

As an actuary for a health benefits company, I'm sure that I'm biased in my response. However, just as our free-market model works in providing the very basics of life—food, shelter, clothing – to Americans, so too I believe that it is appropriate

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and can work for health care. Thus, just as it does for food and shelter, the government should provide regulation to ensure that quality care is provided, and act as a backstop for Americans who cannot otherwise afford to purchase health insurance or pay for care. Moving to a national health-care system where the government pays for all services does not solve the problem of health-care inflation, not without price controls and/or rationing of care, both of which pose a large risk of eroding the quality of care currently delivered in the United States.

Dan Wolak is the senior vice president, group division at Gen Re LifeHealth. He can be reached at dwolak@gcr.com.

David Tuomala:

I believe that government should primarily seek to facilitate a competitive marketplace across the whole spectrum of health-care participants. Purchasers of health-care services should be able to choose from competing plans and competing providers based on cost and quality considerations like they do elsewhere in the economy. Without healthy competition among market participants we are unlikely to see significant innovations in either the financing or delivery of care over the long term.

I would prefer to see the market compete to provide the best choices for each individual purchaser rather than for the government to try to mandate a "one-size-fits-all" approach for everybody.

- Wolak: On the other hand, the government is also the largest purchaser of health-care services, which include Medicare, Medicaid and the military and government employee health-care plans. Given this fact, can it be argued that the government is more concerned about its own ability to control cost at the expense of the private market?
- Tuomala: My initial response was in terms of what I think the government should do rather than what they actually do today. Government is clearly the single-largest purchaser of health-care services, so it obviously exerts a great deal of influence on the system. Unfortunately, the current approach to cost control in most public health-care programs is to effectively mandate a limited increase (sometimes even a decrease) in the cost per unit of health care. At best, this approach merely controls the cost to the government at the expense of the private market as you suggest.

  Besides the potential for cost shifting from the public to private market, there are other possible undesirable effects of this approach that may be overlooked. Because government is the biggest payer, most health care business models need to generate revenue based on the number and type of services provided rather than on quality or efficiency. This carries over into private-sector financing models as well. I think this has a detrimental impact on investment and innovation in health care delivery systems. More efficient systems that result in fewer or less costly services may actually be less attractive for investment than more inefficient systems that actually generate more revenue. This probably leads to less investment in health-care innovation than in other industries.

Moneyball and the Actuarial Profession

by Kurt J. Wrobel

After recently reading the book, Moneyball: The Art of Winning an Unfair Game, I became interested in how the book could be applied outside of baseball. After considering several creative ideas, I finally came to consider its application to the actuarial profession. Although a book written on baseball may appear to be an unusual source for ideas to change our business, the fundamental premise of the book—the systematic use of data to identify and then exploit market inefficiencies—has a very clear application to our profession.

A Summary of Moneyball

In writing this book, Michael Lewis attempted to answer a basic question:

How do the Oakland Athletics consistently outperform other baseball teams while having one of the lowest payrolls in the league?

As addressed throughout the book, Billy Bean, the general manager for the Oakland Athletics, has exploited a market for baseball players that incorrectly values their skills. In order to uncover these market inefficiencies, Billy has ignored the traditional views of scouts and long-time baseball