

'The Odyssey'

Study of Dutch hospitals 2006

Book I

"Sing to me of the man, Muse, the man of twists and turns
driven time and again off course, once he had plundered
the hallowed heights of Troy.

"Many cities of men he saw and learned their minds,
many pains he suffered, heartsick on the open sea,
fighting to save his life and bring his comrades home.

But he could not save them from disaster, hard as he strove -
the recklessness of their own ways destroyed them all,
the blind fools, they devoured the cattle of the Sun
and the Sun god blotted out the day of their return.

"Launch out on his story, Muse, daughter of Zeus,
start from where you will - sing for our time too."

Such is the beginning of Homer's epic "Odyssey". The epic lyrically and enduringly sings of Odysseus the hero of Trojan war who overcomes countless enduring travails to reach home.

Quoting Homer to describe the development in Dutch hospitals in 2006 is nothing short of screaming for attention by being dramatic. But the voyage of Dutch hospitals is definitely an Odyssey. Consider the definitions of Odyssey from The Shorter Oxford Dictionary:

A long series of wanderings

A long adventurous journey

An extended process of development or change

In the light of these definitions there are indeed interesting parallels between Odysseus and the journey hospitals must make in the coming decades. The excellent state of our current hospitals has been achieved with much effort in the last fifty years. We like to complain a lot about our hospitals, but the state of healthcare is both historically and internationally excellent. Like the battle of Troy we have been successful. But the ordeal facing us now is much more arduous and dangerous. We must set course for totally different waters. The voyage shall be exhausting, and many may not even make it. The forces of change are tremendous and the will to change and confront is weakened. Our progress has also unfortunately been limited so far.

We are not a blind bard singing of lost heroes in heart breaking lyrical beauty. We are but analysts collecting, analyzing and reporting numbers. We hope that through the study we contribute our own tiny effort to the success of this momentous odyssey.

'The Odyssey'

Study of Dutch hospitals 2006

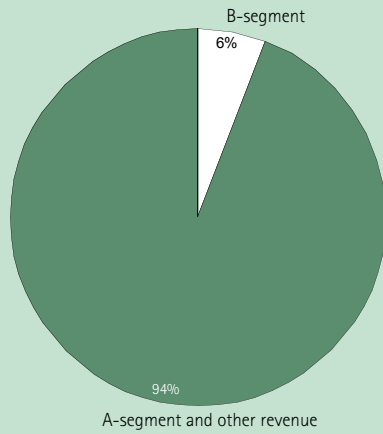
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E1.

The B segment remains a small part of total revenues

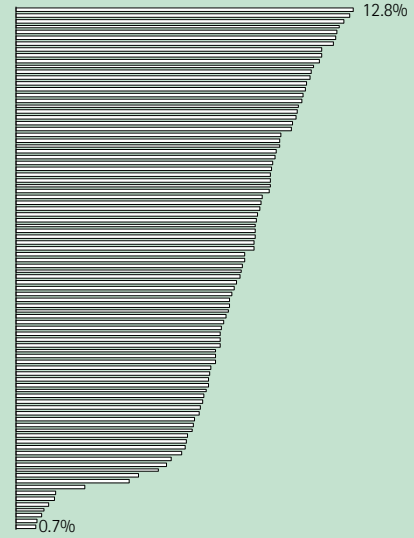
2006 revenue distribution total sector [%]



E2.

Dependence on B segment revenues vary tremendously

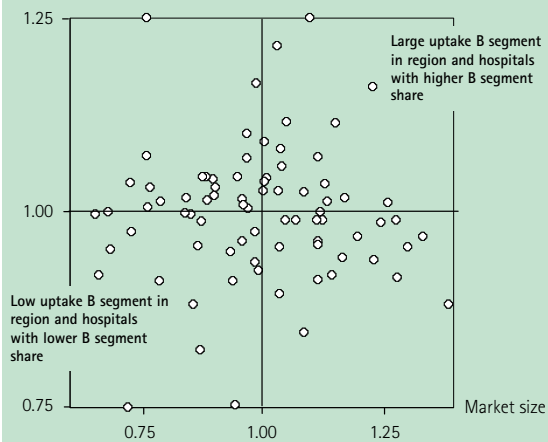
2006 revenue share of B segment per hospital [% total revenues]



E3.

B segment market size and market score vary enormously

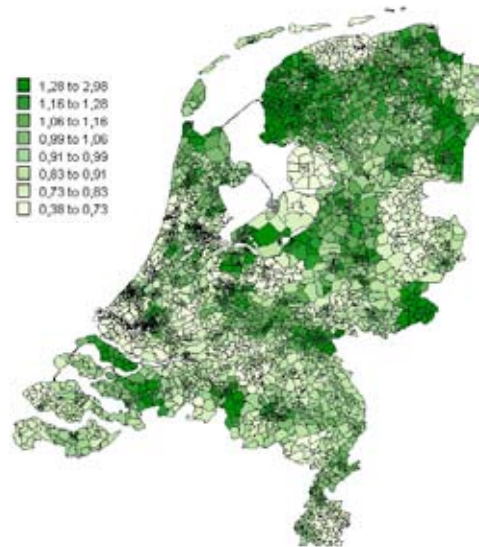
2006 B segment market size and market scores per hospital [relative to national average]



E4.

Large B segment variation across the Netherlands

Actual B segment revenue/expected B segment revenue 2006



Executive Summary

Third year on, the context and motivation of our annual hospital benchmark report should not require a detailed description for our regular readers. This year we have added one important measure on B segment performance. At the same time we have retracted reporting any quality measures on hospital care.

We report five main conclusions:

*B segment size
exploded but
is still 6%*

1) B segment size exploded in 2006 but is still far from 10% of the total hospital turnover (Exhibit E1, E2, E3, E4)

In 2006 the size of the B segment was EUR 885 million, up by 40% compared to 2005. Still B segment is but 6% of the total hospital turnover of nearly EUR 15 billion.

UMCs deliver a very small portion of their turnover as B segment, just over 1%. The small hospitals have the largest fraction of turnover as B segment, just under 10%.

*Large regional
and inter-hospital
difference in
B segment*

It appears that there is a differentiation and specialization ongoing. Mainly the smaller hospitals appear to be focusing on B segment.

There is a large and inexplicable difference in the level of B segment across different communities in the Netherlands. In certain regions the B segment care is as much as 20% above or under the national average (Exhibit E4). At the same time within these communities certain hospitals are providing 20% more of B segment than one would expect and others 20% less (Exhibit E3).

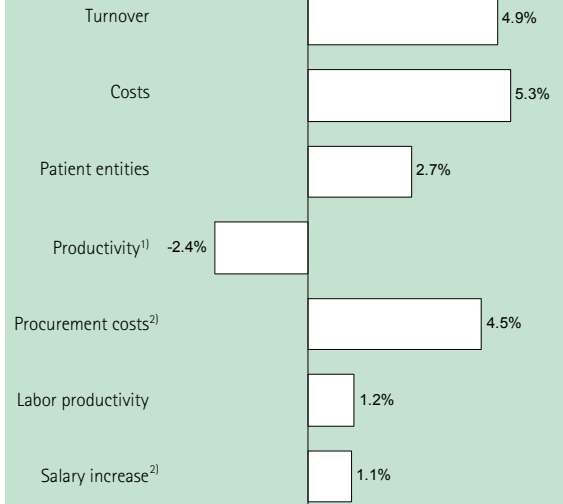
The extraordinary growth of the B segment could be a registration issue. But at 40% growth and given the relative simplicity of B segment probably not all can be explained by DBC registration difficulties. Given that volume of care is mainly supply driven, easing supply as in B segment should lead to much higher volumes. At the same time not being able to control prices and insufficient competitive pressure may lead to further price increases. A 40% B segment size increase is a trend to watch as the B segment is further expanded in the coming years.

E5. **In few "Hot spots" patient churn is significant**
 Hospital areas with 2006 net churn (total production) above 7% of own production



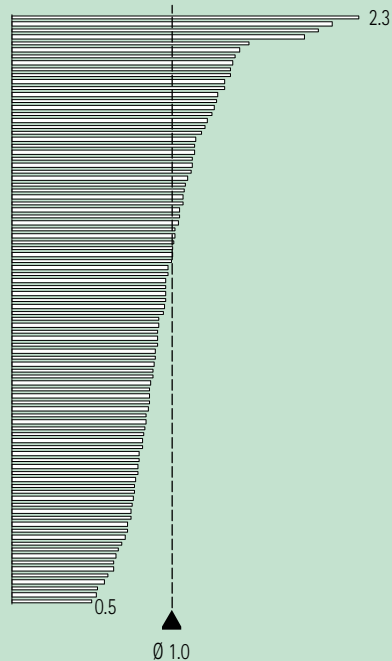
Sector developments at a glance

Change 2005-2006 [%]



1) cost-to-serve EUR/patient entity
 2) real

E6. **Some hospitals have extremely strong market presence, other are much weaker**
 2006 market score per hospital [actual production/expected production on basis of travel time]



Active switching between preferred hospitals: net churn is 2% but for several hospitals it is well above 5%
 2005-2006 market score change [%]



E7.

2) The churn in markets is stable at 2%. But the chasm between market winners and losers is growing (Exhibit E5, E6)

Due to year-on-year switching some hospitals are gaining share at the expense of other weaker hospitals

The number of patients in 2006 who switched their hospital of preference as a fraction of the patients in 2005 was 2%. Since 2004 when we first starting following patient churn the preference dynamics are stable at 1-2%. Given the deregulation and patient choice mantra the churn rates are disappointingly low. On the other hand, at 2% every year the churn has significant consequences for many hospitals, given the fragile financial status of hospitals. The year on year churn when cumulated over the years has significant impact on hospitals. We find that the market share winners of previous years further won market share in 2006. "Hot spots" of competition between hospitals are emerging in the Netherlands. These "hot spots" are mainly urban and competitive regions but there also some rural and less competitive regions. In these regions there is year on year significant switching of patient preferences. This has meant that some hospitals won 20% and more of their natural market share, while others in the same community are performing at similarly depressed levels. (Exhibit E5 and E6).

3) The costs outpaced volume of care delivered. Procurement costs per patient entity grew by nearly 5% even after correcting for inflation. (E7, E8)

Costs increased faster than turnover and volume

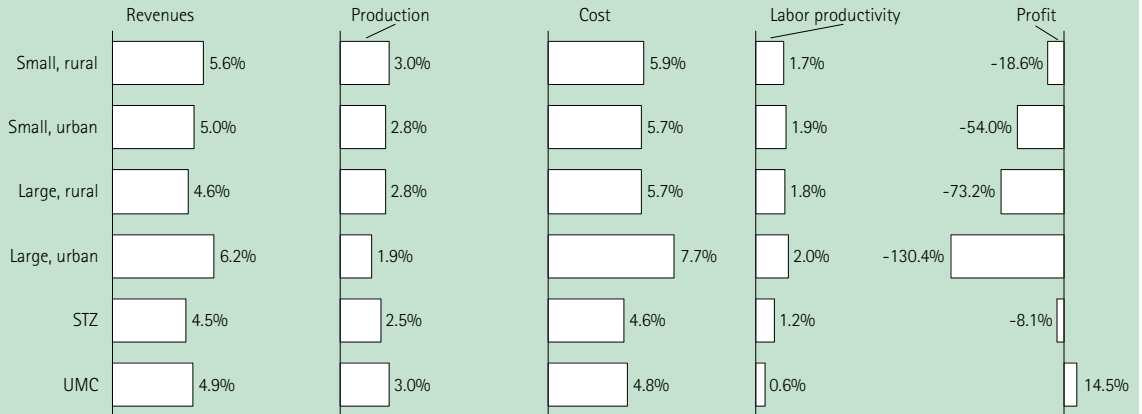
In 2006 the hospital turnover increased by 4.9%. The hospital costs increased even faster at 5.3%. The patient entities in contrast grew by just 2.7%. Even accounting for inflation, the patient entity based productivity of hospitals declined. Procurement costs grew by 4.5% (on a like to like patient entity basis) even after correcting for inflation. The labor productivity, number of patient entities served per FTE, improved for the third year in a row, by 1.2%. But since salary increased on a real basis (inflation corrected) by 1.1% the net gain on labor productivity was zero. It would appear that the hospital staff could justifiably feel that they have been working harder and harder every year. Since 2004 the labor productivity has improved by nearly 7%. Despite this, the overall cost continues to increase.

Procurement costs continue to rocket

Procurement costs are the main reason why hospital costs continue to increase. Procurement costs grew on a real basis by nearly 5% in 2006. As innovation tempo increases, procurement costs will further sky rocket.

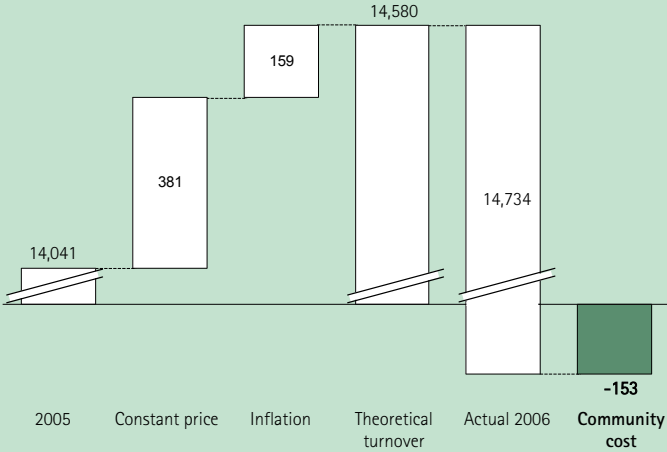
E8. Development per peer group at a glance

Change 2005-2006 [%]



E9. Healthcare cost to the community well above inflation

Cost development 2005-2006 [EUR m]



It is imperative that hospitals seek scale and efficiency in their procurement processes. A differentiated strategy that addresses the cost structure, service level and innovation pace desired per product group and supplier must be formulated. Seeking alliances and pooling together the procurement and logistics within alliances is one possible strategy that has yet to emerge in the Netherlands.

Mainly as a consequence of spiraling procurement costs, hospitals cost an additional EUR 153 m after correcting for inflation (Exhibit E9). These costs might of course be fully justified provided the care for patients in terms other than patient entities was superior. This confirms that the current budgets of hospitals are too low compared to the actual cost increases. The gap between the budget and cost is particularly important since cost management is very much on the strategic agenda of hospitals, insurers and the government. Yet the cost increase continues to be higher than the turnover.

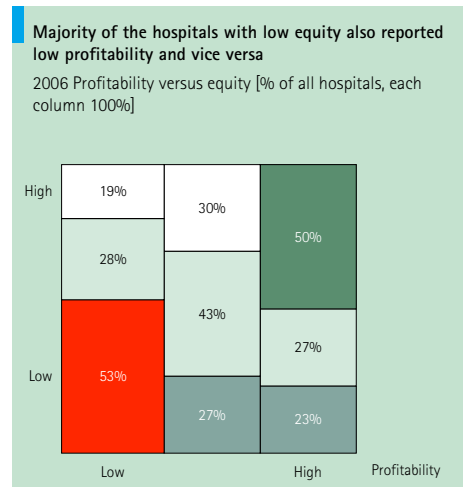
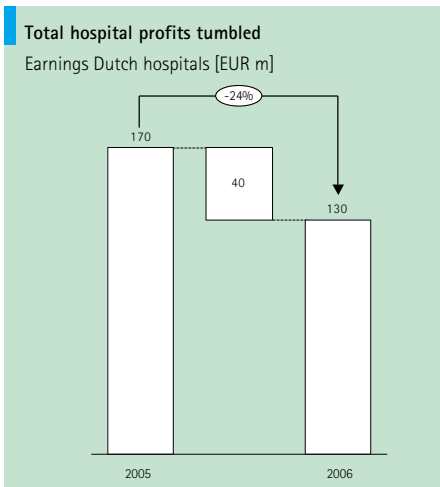
**4) Large urban hospitals had the poorest performance in 2006.
(Exhibit E9)**

Due to financing, operations and competitive pressures large urban hospitals had the worst performance

In our six peer groups the large urban hospitals posted the worse performance. The turnover increase in this group was the largest at 6.2%, but their costs increased even faster at 7.7%. At 1.9% growth in patient entities, the production growth in the large urban hospitals was also the lowest. As a consequence the productivity of the large urban hospitals declined the most. As one would expect, the profitability of the large urban hospital tumbled. It did so by more than 100%. As a consequence the large urban hospitals now have the lowest profitability. Part of this performance deterioration could come from competitive pressure. Large rural hospitals have done better. Perhaps competitive forces are beginning to shape the hospital landscape. Only UMCs managed to improve their profitability in 2006.

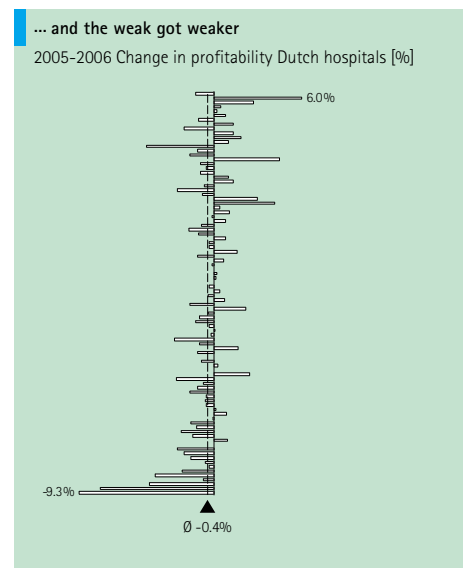
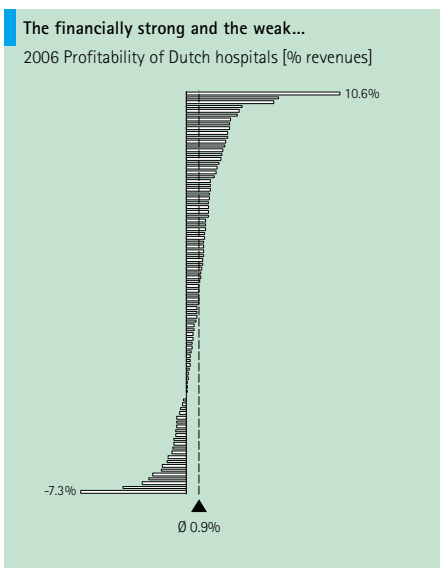
The issues around large urban hospitals must be addressed. These have the scale required to provide more complex hospital care. Also they should benefit from economies of scale. Yet both in operations and financing they have become a vulnerable group.

E10.

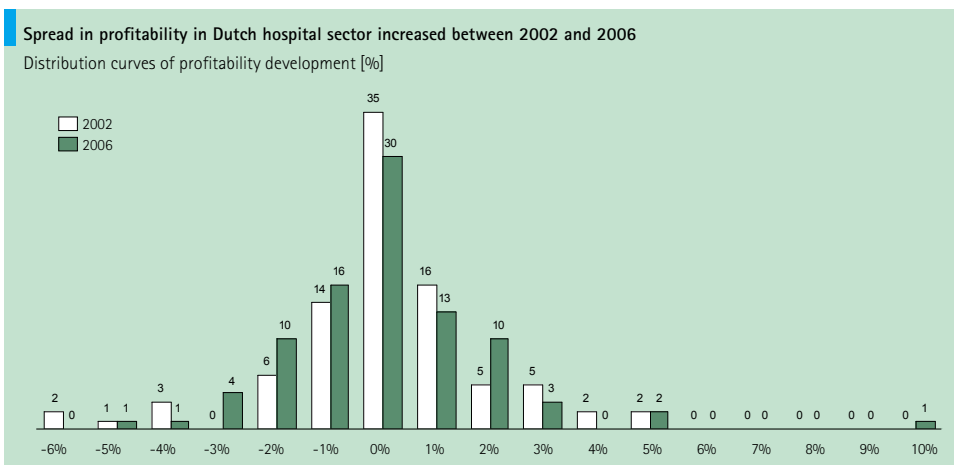


E13.

E11.



E12.



5) The profitability of all hospitals, UMCs excluded, tumbled. An increasing number of hospitals with low equity and declining profitability are financially vulnerable. (Exhibit E10, E11, E12, E13)

*Profitability
tumbled*

The profit of the sector declined to EUR 130 million, a drop of 24% compared to 2005. We estimate that correcting for the financial gains made on surplus financing the "underlying" profitability of the hospitals was only EUR 90 m. This is but 0.6% of the turnover.

*Sizable group of
hospitals has both
low equity and
making losses*

Next to the average profitability, the differences between hospitals were staggering and increasing. There are clearly big winners and a growing rank of loss making hospitals. Averages in a sector as diverse as hospitals were always suspect, but they are now becoming even more irrelevant (Exhibit E11, E12).

*Winners and losers
emerging*

Most worrying is an increasing group of hospitals with low equity and increasing losses (Exhibit E13). This is clearly a vulnerable group. With both market forces and yardstick competition in the fore, this group needs watching out for. In contrast a big group of hospitals had both better equity and profitability. Instead of an equitable distribution we find that the ranks of both the weakest and the strongest are swelling. The differences amongst hospitals are widening. Clear winners and losers are in the making.

Introduction

The rules of management for Dutch hospitals and insurers have changed

The Netherlands has initiated bold reforms in hospital management. The Dutch are boldly pushing forth with a unique healthcare experiment that dramatically affects both payers (insurers) and providers (hospitals). The rules of the game have changed and the care patients receive should be the true measure of the success of these bold changes.

The successful changes in health insurance in The Netherlands are a good example for other countries

Healthcare insurance is one area where the rules have changed. We have successfully introduced a universal, compulsory healthcare package that is also nearly complete and has minimal premium differences. Countries like the US with more than 40 m uninsured and huge premium differences are just beginning to experiment with similar initiatives. For example Massachusetts has recently introduced universal coverage with risk adjustment. European nations with predominantly government funded and managed policies will sooner or later also need to dismantle these and push out the management of the funds to insurers and consumers directly. While an understandable knee jerk reaction in many political circles in many countries is to discredit more market based management and funding of healthcare, such reforms are in our view inevitable. In western countries, the existing systems with predominant public financing are not financially viable in the long run given the continued and relentless growth of funds required. It was way back in the 80's when these changes were first proposed in the Netherlands and it took more than 20 years to get them launched. Even the Dutch with three quarters of healthcare still publicly financed are not future proof. For the other Western countries the odyssey is likely to be more arduous, lengthy and uncertain.

The real benefit of reform is in how healthcare is delivered

One purpose of this study is to look at the success of the healthcare reforms in the Netherlands. On one side one feels disappointed given the rhetoric and promise of the reforms on how little progress has been made. On the other side it is remarkable how much has changed and gained in the two year period. While the rules of the game have changed effectively on the insurer side, it is disappointing to note that little has changed on the buyer side as well as on the provider side. The patient care has thus not benefited yet. The real success of healthcare is of course in the transaction between the care giver- the hospital organization and the care receiver- the patient. The results of this litmus test are not in.

*Hospital delivery
side reforms
are much less
manifest and
the benefits will
take much longer
to materialize
because ...*

Two years on, competition between the payers is healthy, and the insurance premiums are low, in fact dangerously low because they are currently under cost price. Despite this the true measure of insurer market success is not short term insurance premium but longer term healthcare delivery. From the latter perspective it is much too easy to bemoan a lack of urgency and competency on part of the insurers. However, one must bear in mind that we are just two years into the reform and the reform is no less than a revolution. After all, previously insurers were administrative fund managers. As one of the directors quoted: 'if we did any active co-management with the hospitals we did so creatively and mischievously by bending the existing unhelpful rules and regulations.' No wonder it will take a few more years to dismantle the decades of organizational inertia and create a new élan. On the positive side, insurers have cut administrative costs and are building up competencies required to become a useful "buying" partner for their hospitals. If all hospitals are still contracted and quality plays but a meager role, it is not because insurers do not understand what is needed, but most likely that they understand it all too well. It is understandable that regulators and government utter frustrated yelps from the sideline. The truth is that quality is hard to measure let alone communicate. The insurers operate in strongly competitive markets and are vulnerable to critical buying consumers every year. Insurers understand perhaps better than anybody else, except the hospitals, what is possible and what is playing with fire. One day insurers may need to walk on coals, but we cannot blame them for not trying unless they have developed the required skills.

The purpose of the current annual study, our third in a row, is to look closely at the provider or hospital side of reforms. To understand what reforms have meant to the hospitals, it is worthwhile to step back and take a look at the patient behavior.

*... patients
switching is
limited and ...*

The patient preference of hospitals is conservative. In the last years we calculated that on average the patient churn (switch from year to year of net patient preference for hospital¹) was 1-2%. Compare this with the 20% plus churn in the insurers market in 2006 and the relatively "low" churn of about 5% in 2007. To encourage churn, insurers are no longer obliged to contract all hospitals. However in reality insurers are weary of doing so, which confirms the strong patient-provider nexus.

¹ The underlying churn is higher, as many more patients may switch. We report the net churn which only measures the net difference after all switches.

... hospitals are conservative, complex and it is notoriously difficult to describe their performance

Hospital products are notoriously difficult to describe and measure. For patients to be willing to switch, they would need to be well informed about the pros and cons of different treatments and doctors. In reality the information asymmetry is likely to be too overwhelming for most patients. The information patients value is primarily quality of healthcare delivered. Given that nearly all basic care is covered in the insurance package, there is little financial incentive for patients to choose hospitals.

The realized reforms have not helped in changing behavior because...

Freedom of choice, which is what markets should be all about, is also freedom of choice for providers. Freedom of choice for nurses, specialists, family doctors and other providers to develop and offer new treatments and align the healthcare processes to the best of their knowledge, talent and ambition. We believe, as we further describe in the market performance chapter, that for a long time to come the real impact of reform is not patient choice but provider choice.

...DBC are not suitable for patient information...

One aspect of hospital reform was the introduction of DBCs. Last years a tremendous amount of effort and resources were spent to make hospital products transparent – the DBC initiative. DBC is a unique Dutch experiment. The irony of course is that a DBC contains little relevant information for patients. It describes a “typical” treatment profile and couples it to the average financing. However, the typical profile is irrelevant for a patient and financing is even more irrelevant since the insurer foots the bill.

...and as DBC are not reliable not as helpful to insurers and hospitals as was meant to be...

DBC are meant as the buying and selling language for insurers and hospitals and not so much for patients. And indeed, should the insurers carry the risk of hospital financing, it is reasonable that they would need a “stable” and “relevant” description of the products they are buying. Most hospital products are defined as DBC. However only a small fraction of hospital services are negotiable both for value and volume between insurers and hospitals: the B-segment. The rest, the A-segment, is defined and billed according to A-segment DBCs. In practice so far budgets are simply based on the old FB production and capacity based parameters.

...B segment is too small and from budget perspective mainly irrelevant...

The Dutch policy makers and media talk and report a 10% B-segment and even the cabinet plans announce a doubling to 20%. Yet we find that the actual level as a fraction of total hospital turnover was 6% in 2006 up from 4% in 2005. Further, DBC have created more administrative burden than proved useful so far.

The second aspect of hospital reform has been to make insurers directly accountable for hospital performance. The reasoning goes that if insurers, more than administrative fund managers, are also financially responsible for their hospital's performance they would coax better performance.

...risk adjustment models do not help drive sense of urgency amongst insurers.

In reality the risk adjustment model in place has so far shielded insurers from strong financial winds. And since typically most insurers had better understanding of risk adjustment models than of hospital performance, they have understandably invested their best brains in lobbying and tweaking the risk adjustment models.

Luckily, a financially disciplined Dutch government assigns a higher priority to its own budgetary goals than run away hospital sector reforms. Classic top down budget cuts have been imposed. Unfortunately, the real growth of hospital sector is constantly underestimated. A 5% plus value growth per year is much more realistic than the budgeted levels of 3%. And on top of already underestimated growth levels the discounts and budget cuts from a bygone era of centralistic planning are still in fashion rather than a liberalized patient based healthcare. There is something highly ironic about the centralistic trio of VWS, NVZ and ZN agreeing to a budget cut when the purpose of the reforms is to delegate authority to the individual players. Government must be fiscally prudent and disciplined but it must be realistic in budgeting the hospital growth and it should not impose top-down budget cuts. Performance improvement should be the goal. We believe budget cuts have the serious risk to boomerang and hurt the patient more than the provider organization.

A small B-segment, administratively cumbersome and strategically unusable DBC, slow uptake by insurers shielded by risk-adjustment models, and underestimated budgets with sector wide cuts have meant that hospital sector reforms have been wishy-washy so far.

Even with these growing pains the reforms could still be worthwhile. After all, insurers and hospitals need to chalk out their plans for each other with the patient as the linking pin. It is heartening to notice in our work how much energy and investment both insurers and hospitals have spent to work out these new roles for themselves.

In this study we look at hospital performance in detail. Second year on since the introduction of the B-segment and DBC we ask the following questions:

- 1) Have hospital markets become more dynamic? Is patient churn higher?
- 2) How is the B-segment developing given that it is the "test tube" of reforms?
- 3) What is the productivity improvement of hospitals? A lower cost structure appears to be the one consistent theme in hospital reform both from government and insurer's perspective. Mind boggling productivity improvement targets of 10-20% have been reported. But what has actually been achieved?
- 4) How is the financial health of hospitals? Hospitals are cost driven institutions. Profits and costs are of course easily substituted. But should hospital reform ever take off, hospitals will need to be much more financially robust.

Goal of the study is to look at the sector developments and individual hospital performance in relation to its peers.

These and other performance questions are answered in this report. As always our primary goal is to look at an individual hospital's performance. Sector wide conclusions are secondary. We hope to help both the individual hospital and insurer to actively manage it's portfolio and in doing so to improve it's performance.

Performance is relative. Some scorch ahead, others lag behind. This lagging behind of a few hospitals feels "undesirable". But in reality it is an essential process by which all performance improvement takes place. The front runners set the pace. And the laggards are compelled to wake up from their organizational lethargy. The laggards may not win this race, but they would contribute just as much, if not more, to the improvement of the entire pack. It is the aim of this study to analyze and describe this process.

The report has its limitations. The conclusions must be seen in the context of the data sources and the complexity of the sector.

The report is based on available information, mainly from the hospital annual reports. The source of the data is both a window to the charm and also the limitation of this report. Hospitals are extremely complex enterprises, and simple measures as those reported in annual reports do not do justice to the full scale and complexity of their operations. Hospital annual reports are highly standardized and yet there are differences in reporting definitions and pace. We have done everything we could to make the available information useful. The conclusions we draw based on the data and analyses may appear dramatic or banal. The third party reporting of the results in the study, for example, in the media, may further selectively exaggerate or ignore valid parts of the study. We are aware of these risks and limitations. By pushing forward with publication for the third year we hope that the positive impact for the hospitals and their patients

outweighs the potential risks of misinterpretation. Thus our advice to the reader is to be mindful before drawing conclusions and to please do so by understanding and placing the answers in the context. As always when in doubt, ask, and never stop asking till you get the right answer.

Market performance

Empower patients...

The litmus test of healthcare policy change is in the market dynamism. Patient or consumer choices are traditionally viewed as defining markets. Under the discerning eyes of demanding patients, hospitals would need to improve. But markets are also just as relevantly defined by providers. Markets determine the ability of hospitals as institutions to shape and realize their ambition. In healthcare with huge and widening information asymmetry, the degree of freedom of healthcare providers is even more relevant than that of patients. It is important to emphasize empowering patients, but it is a mistake to further shackle and discredit the care provider. Just as much emphasis is needed to enhance the care provider's degrees of freedom to realize their ambition.

... but also empower care givers

With more than thousand employees in an average hospital, hospitals are hotbeds of ambition. A large fraction of hospital employees are professional care givers, with highly specific expertise. These skilled experts are not just specialists, who make up about 10% of the hospital employees. They are also nurse practitioners, pace maker technicians, operation room staff, technical maintenance workers and so forth.

Each of these skilled experts have highly specific education and life long, follow-up programs to keep abreast with the rapid changes in their profession. Innovation in healthcare is relentless. And by nature and by need these hospital employees have the ambition to work at the cutting edge of innovation. To be the best in their own profession. To provide the best available care to their patients.

Success of healthcare markets can also be judged by the freedom "exercised" by care givers

Hospitals have high level of ambitions. Often the resources available to fulfill the ambition of the tens and hundreds of different professional workers are limited. And there is constant tension as each of the professional worker strives to push its own development envelope while the entire organization in the current modus finds it impossible to take the risk of making the necessary investments in its entire human capital.

It is illuminating to look at the success of markets from the employee perspective. If you are a nurse practitioner with a burning ambition to develop and offer cutting edge COPD programs to all patients in your region you need the rest of the hospital organization to support you in your ambition. Let's delve on this example just a little longer. Imagine that you are this top notch nurse practitioner. You have studied healthcare and worked

Care providers have useful insights in how to improve healthcare e.g. through disease management

many years to develop your specific knowledge about COPD care. The lung specialists in your hospital support you in your ambition. You have worked out that several hundred patients in the region suffer from asthma and COPD but do not get the level of care necessary. On the other hand there are about another hundred patients on heavy medicine that is not suitable for their illness. An ideal disease management program would require a much more patient oriented approach, including attention to timely measurement, prevention of attacks, regular exercise, and proper medication. The over stretched hospital organization is simply not designed to offer such programs. Most COPD patients come in after an attack when it is already too late. There is nobody that works with them as their regular healthcare coach to improve their health. You know intuitively and everybody understands that your ambition is a win-win proposition for everybody. The patients would get the care they need. Their health status would improve. Hospitals would free up their valuable resources like the lung specialists time for more severe cases. And insurers would save millions of healthcare euros because the programs would over the life cycle of the disease be much more effective.

But while everybody may agree they have a good plan ...

Since you are a nurse practitioner and not a business analyst, in most cases you would need a business plan to convince others less medical and more business minded. Let's suppose you get help to chalk up a business plan. And the plan is pretty impressive. The director, the lung specialist, the insurer, the patient lobby group and the Ministry all agree that this is a really good plan and should happen. But who should make it happen?

... nothing happens given huge vested interests

Unfortunately in most cases very little happens. The hundreds of patients who currently do not get the care they need when they need it are a potential financial risk for the insurer should you start addressing their need. The budget restrictions prohibit you from setting up programs for this needy group within your hospital. And anyway both clinical and polyclinic capacity are not available. The patients who get the "wrong" treatment at the "wrong" time, need to be actively recruited and readdressed. However this most likely would cause friction in the current financing and business case of existing care givers. All in all, to make a long story short, while everybody agrees that your ambition to offer a COPD disease management program is absolutely spot on, nobody actually does anything to help you to get it done.

*Regulation stifles
innovation,*

This may be one example, but it is typical of how healthcare is offered across the world. How does it come to be that most obviously brilliant solutions that would offer value across the chain for all players haven't got a chance of being realized? We believe it has to do with lack of freedom for healthcare providers to act to the best of their knowledge for the benefit of their patients.

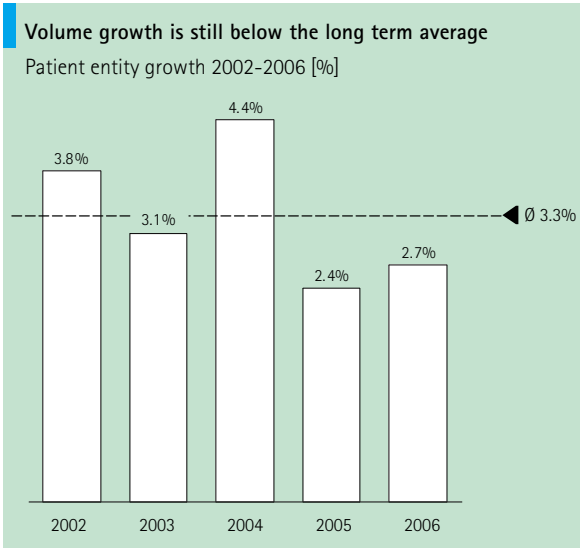
In a regulated system, the best chance of success is if all nurse practitioners work together to lobby with the regulators and the Ministry to launch such programs. It will take a long time, perhaps decades, but eventually with a little bit of luck your program would get accepted with an "official" tariff and rules and regulations. The sad part about it is that what may get accepted is that which you started lobbying ten years ago. It was cutting edge then, by the time it got accepted it was pre dinosaur time innovation. And worse yet, what gets accepted is frozen in time. Care must be provided according to the set rules and tariffs and may not deviate despite the fact that the best practices constantly evolve and improve.

*freedom of choice
delegated to
market unleashes
innovation*

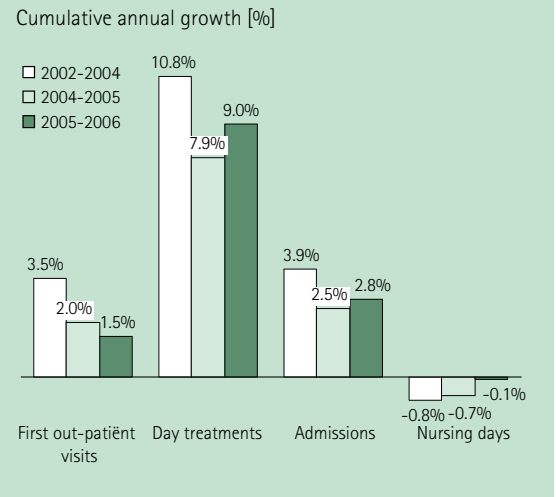
This is the classic failure of healthcare regulation. Should there be more free choice for the patients, and the insurers and the hospitals, they would chalk up such a program themselves. In the regulation dominated scenario once a program gets accepted it is available to everybody across the country no matter how antiquated it be by the time it gets accepted. That's the advantage but also the disadvantage of regulation. In free markets, one practice, one hospital, one insurer may make such a program available to their cohort of 500 patients. Everybody else maybe excluded in the beginning. Free choice by definition introduces time bound differences in access and quality of care available to different patients. But innovations get accepted quickly and as a rule spread rapidly once a single person takes the lead. A single nurse practitioner, a single specialist, a single hospital and insurer are much more likely to make an evaluated business and medical decision, implement and monitor the program than to get the whole country with all the different vested interests lined up. The advantage of free markets is that we as patients would reap the benefits of top professionals seeking the best for themselves and for us. The disadvantage is that there would be time bound asymmetries in care levels provided across the nation by different care providers.

Often when we talk of the limits of free markets in healthcare we think of the limitation of a patient to make valued decision. It is true that information asymmetry limits patient's ability to make valued decisions. However free markets are just as much about

M1a.

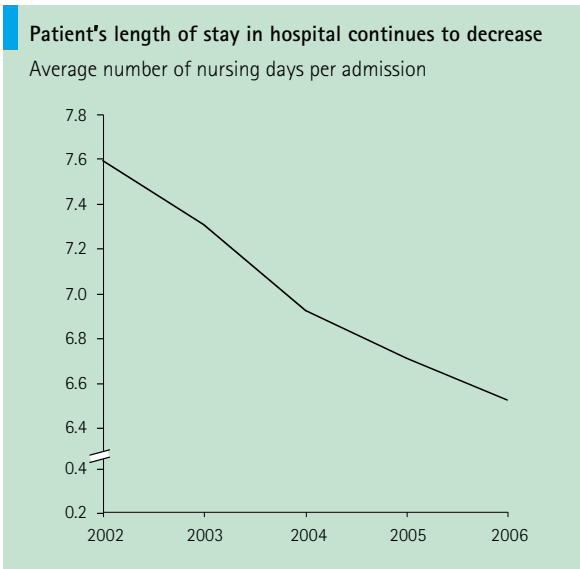


Growth in first out-patient visits rather low
Cumulative annual growth [%]

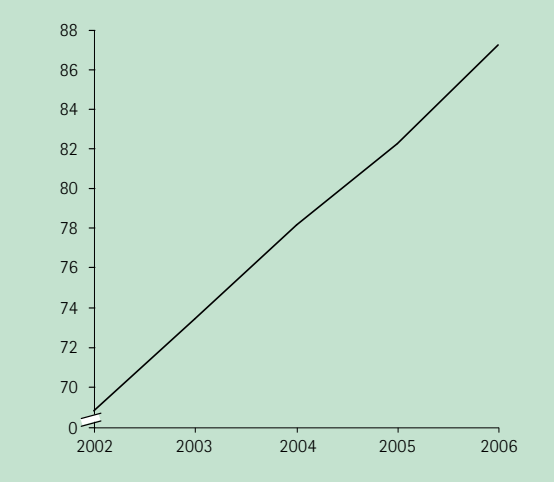


M1b.

M2a.



Increasingly treatments can be undertake in a single day
Average number of day treatments per 1.000 admissions



M2b.

unshackling the care providers. By giving healthcare professionals the freedom to realize their ambition healthcare would improve for all.

Healthcare reform in the Netherlands aims to enhance freedom of choice for providers and patients. For the third year since the introduction of the reforms, we look at the developments in this chapter.

1. Slower growth in patient entities in 2006. Out-patient growth at less than half historical levels.

*Growth in volume
still low*

In 2005 the growth in patient entities was lower than the historic levels (Exhibit M6). At 2.7% the growth in patient entities in 2006 was lower than the historical levels of above 3% posted since 2000. Given demographics and innovation, the underlying volume growth should be higher. More freedom of choice for patients and hospitals is also likely to enhance volume. Thus both the deregulatory trends as well as demand trends would suggest that the current volume growth is on the lower side.

The lower growth levels are baffling. There could be a number of different reasons for this:

- The higher levels between 2000-2004 reflect a catch-up growth rate
- Due to DBC, the patient entity registration has become less reliable
- The family doctors have delivered a bigger share of care, reducing the hospital volume growth
- Budget cuts have demotivated hospitals to provide the level of care required

We will need to follow the growth rates for a number of years to see which of these reasons are valid. Most likely all of these effects are at play. We would expect that growth rates should pick up to significantly higher levels.

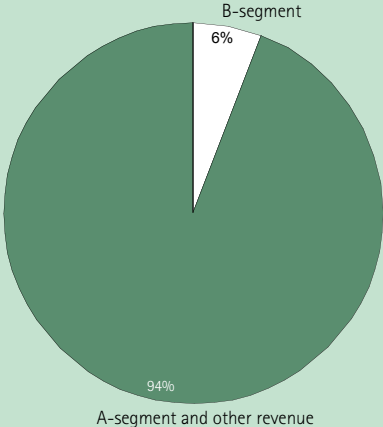
*First out-patient
growth is low*

Within patient entities the case-mix between out-patient, in-patient admissions, day treatments and nursing days shows a deviatory growth pattern (Exhibit M1b). First out-patient contacts grew by only 1.5%, less than half of the historical levels. And for the first time in many years the decline in nursing days came to a near halt. Both day treatments and in-patient admissions grew faster than 2005 though still not at the 2002-2004 levels.

M3.

The B segment remains a small part of total revenues

2006 revenue distribution total sector [%]



Day treatments continue to be more popular

The average nursing days for each inpatient continued to be lower, being at 6.5 days in 2006, down from 6.7 days in 2005 (Exhibit M2a) Day treatments continued to grow strongly at 9% (Exhibit M2b). The relatively higher growth in inpatient admissions in 2006 is perplexing. Increasingly treatments tend to be in polyclinic and day treatments. In 2006 the ratio of inpatient to outpatient growth in 2006 is much lower.

The slow growth of out-patients could be a worrying signal in as much as it reflects unmet demand. The slowing down of reduction in nursing days is also undesirable given the operational benefits of lower average length of stay.

As we will see in the operations chapter the costs of delivering hospital care continued to increase. At 5% these clearly outpaced volume growth even after correcting for inflation.

2. At 40% increase B segment exploded. More than 20% differences in level of B segment between regions and between hospitals in a region.

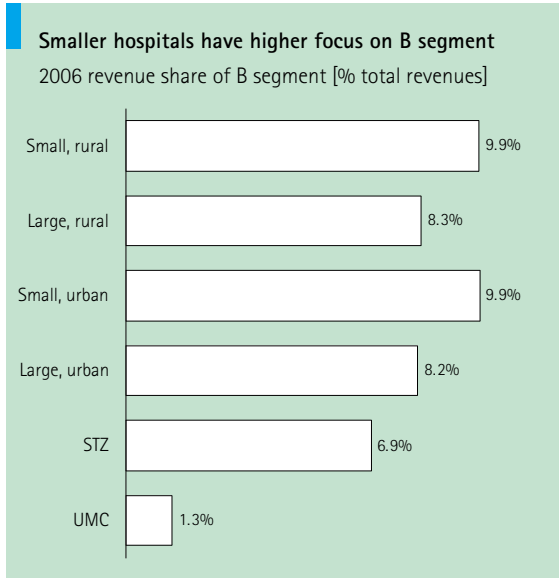
Developments in the B segment are critical measures of success of the hospital reforms. The size of the B segment, the churn in the B segment, pricing and quality of care delivered are relevant measures.

As a percentage of total hospital turnover, the B segment was 6% in 2006. Given the total hospital turnover in 2006 of EUR 14.7 billion this puts the size of B segment at just under EUR 900 million. An average hospital B segment is than about EUR 10 million (Exhibit M3).

B-segment exploded

The size of the B segment grew significantly in 2005-2006. In 2005, hospitals reported B segment of EUR 575 million. Even after correcting for the 11 month effect in 2005, the growth in B segment comes to above 40%. B segment grew from a hypothetical EUR 627 million on a 12 month basis in 2005 to EUR 885 million in 2006. The growth of A segment corrected for B segment growth comes to 3% in 2006. The difference in growth pattern between B segment and A segment is staggering and given the totally different regulation regimes needs to be understood better.

M4.



Registration could be part of the issue

Part of the large growth in B segment could be a registration effect. Since DBC are still not stable and not all hospitals equally adept at registering them, the B segment turnover in 2005 and 2006 should be viewed with some caution. The EUR 200 million extra B segment in 2006 could be care delivered but not registered as B segment in 2005. However by definition B segment are simpler treatments with less ambiguity in registration. One would expect that for the B segment at least DBC registrations would pose limited problems.

Deregulation would stimulate high growth in B-segment

The extraordinary growth in the B segment could be a consequence of deregulation for both the care providers and care receivers. B segment is mainly composed of discretionary care. The patients have a choice in the timing of care and so do the care providers. Both the volume and value of the B segment is free for hospitals and insurers to negotiate. Given that budget-, volume- and price caps for B segment are off, the "explosion" in B segment would well reflect both the risks and benefits of free healthcare markets. We would expect that volume of care would increase in free markets. The underlying demand for healthcare is probably much larger. A unique experiment at six sites in the US showed that the underlying demand is much higher². Letting go of price and volume caps as has happened in B segment should encourage hospitals to meet this latent demand.

To understand this explosive growth in B segment it is necessary to split growth in a value and volume component. However, unfortunately the volume mixes per hospital are not publicly available. Should the B segment size growth be a volume increase it would reflect demand and supply potential. Should it be a price increase it would show that the negotiation power lies with the hospitals.

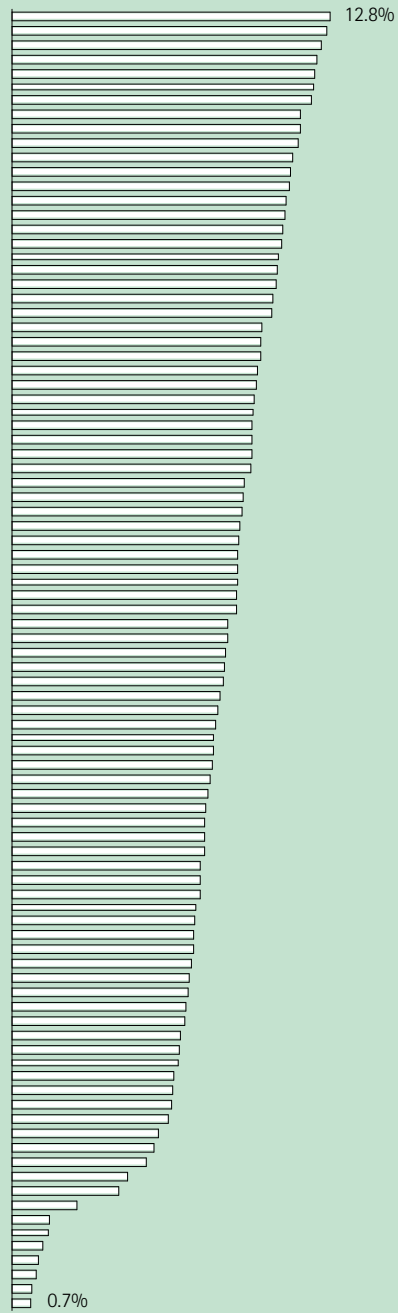
UMC have very low B-segment

At 6% the volume of B segment is always considerably lower than the oft quoted 10%. In 2005 the volume was only 4%. Part of the difference could be a registration effect. However, given the nature of the B segment, it is unlikely that these would have an "open" period of more than 2 years. The lower 6% appears to be mainly due to UMC which deliver a very small part of their total turnover in B segment. The general hospitals have a B segment of 8%-9% (Exhibit M4).

² J.P. Newhouse and the Insurance Experiment Group, "Free for all? Lessons from the Health Insurance Experiment", Harvard University Press, Cambridge (1993).

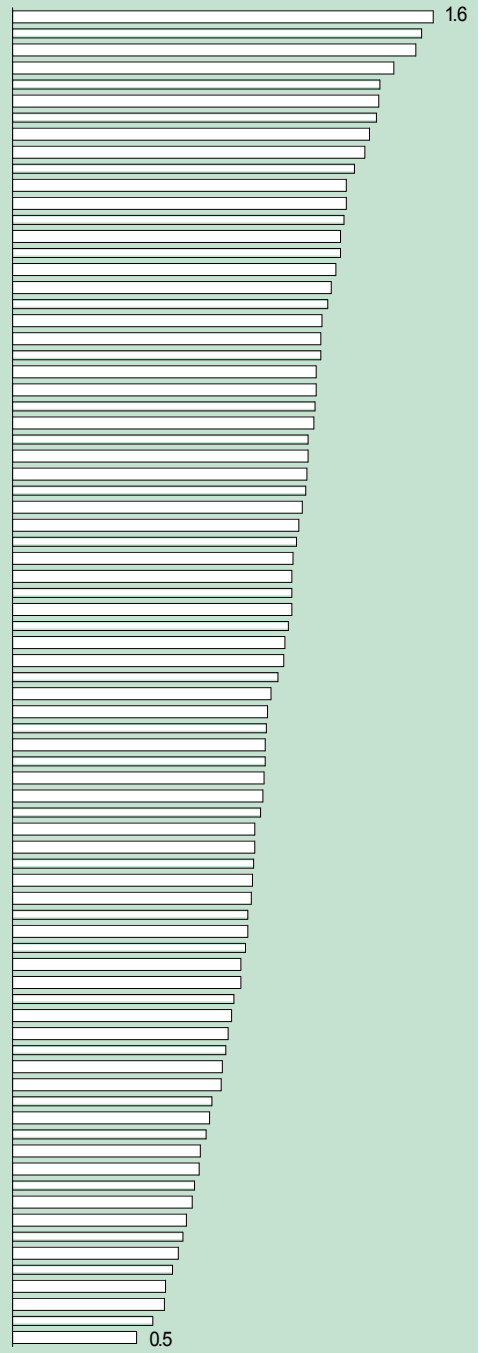
M5.

Dependency on B segment revenue varies with a factor 18
2006 revenue share of B segment [% total revenues]



M6.

Variation in B segment market performance is huge
Actual B segment revenue/expected B segment revenue 2006



The extraordinary growth in B segment can only come at the expense of A segment in a world of fixed budgets. Given the discretionary nature of B segment as well as the budget limits this carries a potential risk of unmet need in the A segment.

Between individual hospitals the differences in B segment are significant. The smaller hospitals, both rural and urban, have a significantly larger dependence on B segment. While for UMCs, the B segment is less relevant at less than 2% of their turnover. The teaching hospitals, the STZ group, has a B segment turnover of 7%. The large hospitals at 8% are in the middle between the small and teaching hospitals (Exhibit M4).

Are some hospitals pursuing a B-segment focus strategy?

The B segment variation among the peer groups confirms the fundamental differences between the peer groups. The basket of treatments they provide is different. Hospitals argue that within the B segment there are also significant differences. For example UMCs accept on average more "difficult" B segment patients, and thus the group is less "attractive" for them. Low B segment turnover maybe a conscious business decision to limit B segment by UMC. However if DBC are defined properly and work as intended this differentiation within a DBC should be irrelevant. It could also be that smaller hospitals have better aligned their processes and actively sought and delivered B segment care to patients resulting in them attracting a higher portion of this care. In time if this trend sets forth we would get differentiation and specialization. As the size of the B segment increases a few hospitals may focus on the B segment. The increasing complexity of delivering care also favors such a specialization, since hospitals would need both size and scale in order to deliver more specialized care. The more routine care, the B segment, can then be shifted to a few smaller hospitals more specialized in it. The current differences in the B segment can be the seed of this specialization. If this be the case than the expansion of the B segment as well as the definition needs to consider the desirability of such differentiation. Such a differentiation also implies that patients are proactively biased in hospital choice depending on treatment requirement and hospital focus.

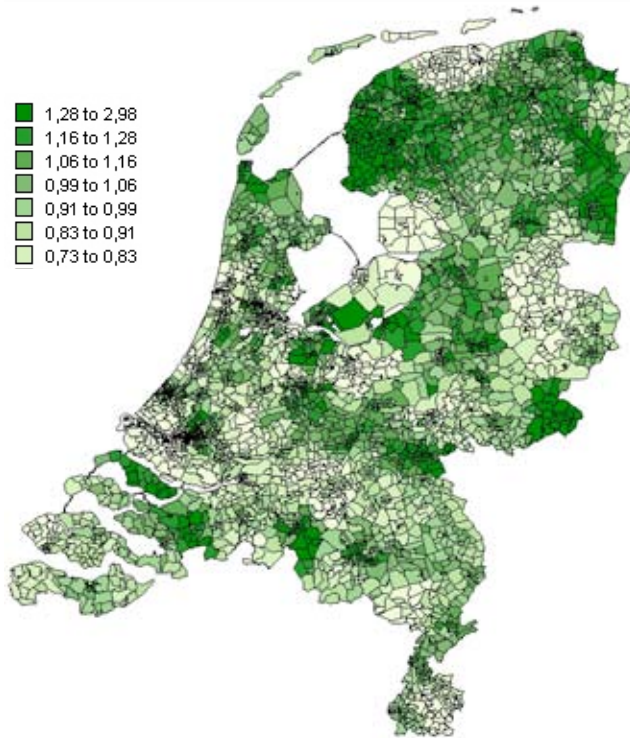
Relative to turnover the size of B-segment varies by a factor 20 between hospitals

The variation within individual hospitals of B segment as size of turnover varies from nearly 13% to under 1%, a factor of almost 20 (Exhibit M5). Community care needs tend to vary based on demographics, the alignment of healthcare value chain, as well patient and provider preferences. However there is no obvious reason why one hospital should provide 18 times more B segment than another hospital. These large differences suggest a specialization trend within hospitals for B segment.

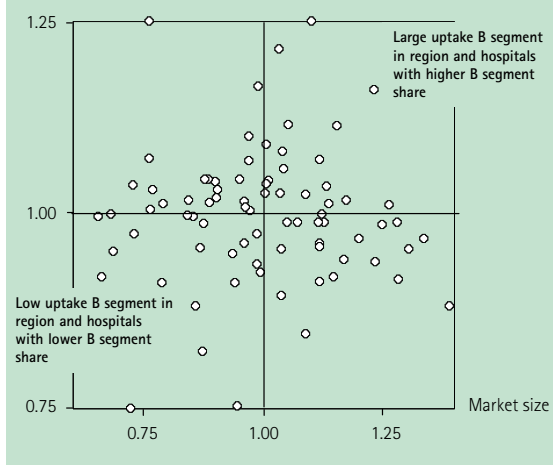
M7.

Large B segment variation across the Netherlands

Actual B segment revenue/expected B segment revenue 2006



M8.

B segment market size and market score vary enormously2006 B segment market size and market scores per hospital
[relative to national average]

This year we have also defined a market score based on B segment performance of a hospital. B segment market score is a measure of the amount of B segment a hospital provides in a given year against what one would expect that the hospital should provide. A B segment market score of one is on target, and a score of above one is better than market performance. We have defined the expected B segment size for each hospital as the average B segment across the Netherlands translated to the community a hospital serves.

Some hospitals have strong B-segment market performance

The B segment market score reflects mainly the market performance of a hospital. B segment score vary from 1.6 to 0.5 (Exhibit M6). The hospital with the best performance in B segment attracts 60% more B segment than one would expect on the basis of national average levels. Exhibit M7 shows the B-segment market performance across the Netherlands. There are clear pockets of much higher B segment care in the Netherlands. Groningen and Friesland have a higher B segment, as well as parts of North Holland, Overijssel and Gelderland.

There are large regional and inter-hospital differences in B-segment

The above average national performance is composed of two effects. Firstly the total level of B segment care in a region could be much higher than the national averages. Secondly one hospital could attract and provide more of this care while another hospital in the same community could fail to do so. We have looked at both effects in Exhibit M8. The size variation of the B segment across the Netherlands is large. The volume of care provided even for B segment varies inexplicably from one region to another. And within these regional differences the performance of one hospital varies significantly from another. There are communities in the Netherlands with more than 20% B segment consumption above the national average. And within this higher consumption market a hospital could itself do more than 20% than one would expect based on its position.

M9.

In few "Hot spots" patient churn is significant

Hospital areas with 2006 net churn (total production) above 7% of own production



3. Overall market net churn is fairly constant at 2%. Previous winners of market share have gained further, putting more distance between themselves and the losing share hospitals.

In this section we look at the churn and market performance of individual hospitals for their complete portfolio. In the last years we have reported that the net churn in hospitals is 1-2%. The net churn in 2006 was 2%. That is on average 2% of the patients shifted their preferred hospital between 2005 and 2006 (Exhibit M10a).

The individual churn levels across hospitals are also displayed in Exhibit M10b. We find that several hospitals had churns of well above 5%. To lose or win 5% or more patients within a year has significant consequences for hospitals. Currently about half of the budget is based on these production measures and the other half is fixed, or at least only indirectly based on production. A churn above 2% for an individual average hospital means the difference between profit and loss.

Small year-on-year churn has large cumulative effect

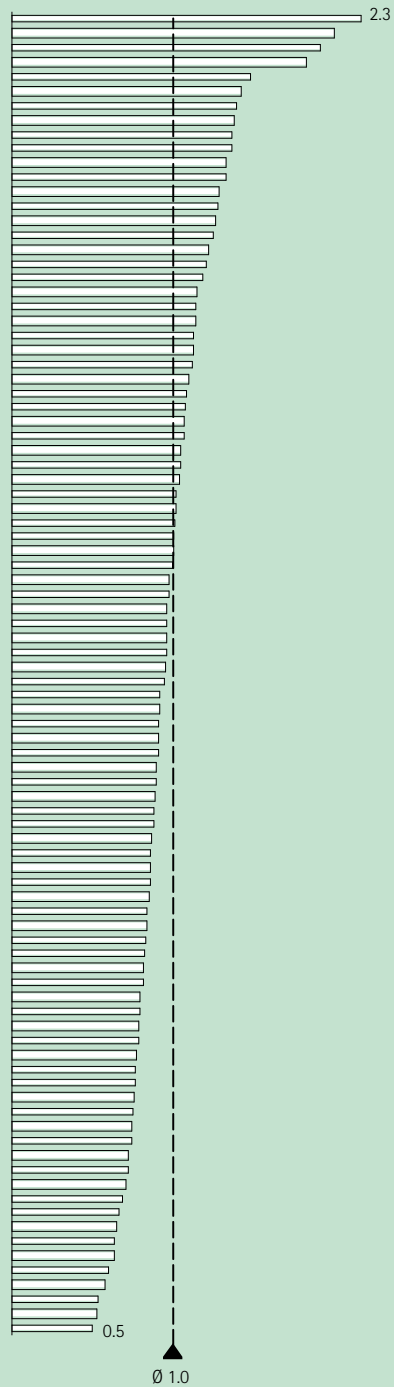
The churn levels are historically steady. Since 2004 when we started following the market scores and churns we find that the net churn levels are between 1-2%. In 2006 the net churn was again 2%. The gross churn will be much higher. The net churn across different treatments shall be considered. However even with a EPB based net churn of 2% over a period of many years steady winners and losers emerge (Exhibit 10d). There are regions in the Netherlands where the competitive forces between the hospitals are the strongest. In these regions the most patient switches take place. We could call these regions the "hot spots".

Hot spots of strong competitive behavior are emerging

The hot spots are shown on the Dutch map in Exhibit M10a. The location of the "hot spots" is for a large part obvious. In urban densely populated regions, with large hospital choice, patient preferences are manifesting themselves strongly. We see that Rotterdam, Utrecht, Amsterdam, Den Haag, Nijmegen, and Eindhoven regions have the highest cumulative (2002-2006) churn. In addition it is interesting to note that several larger and more stretched rural regions that are thinly populated are also experiencing larger patient migration. Flevoland and a belt across Friesland, Drenthe and Groningen is one such "hot spot".

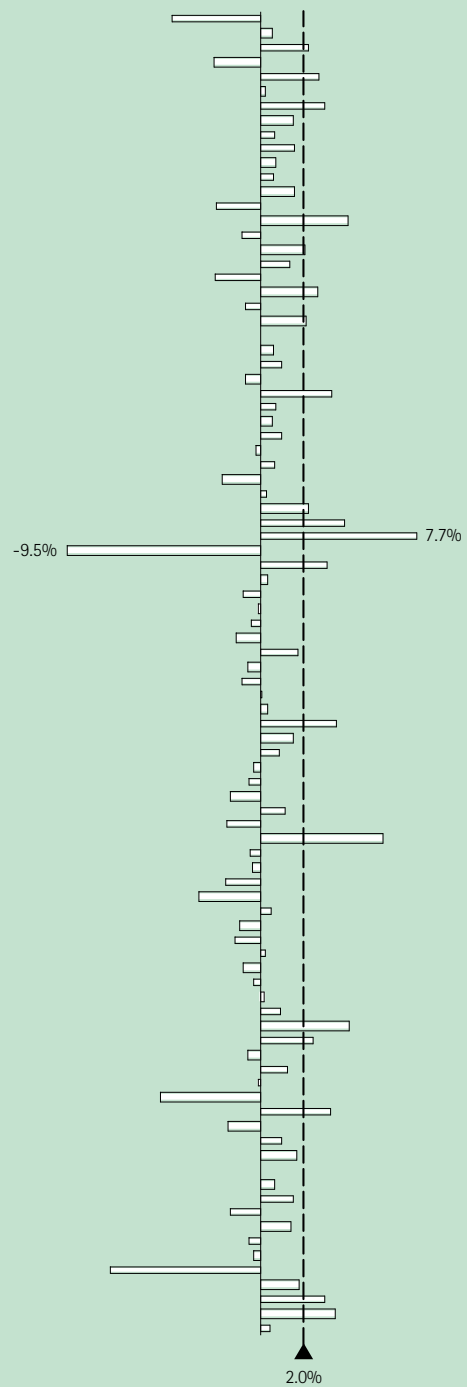
M10a.

Some hospitals have extremely strong market presence, other are much weaker
 2006 market score per hospital [actual production/expected production on basis of travel time]



M10b.

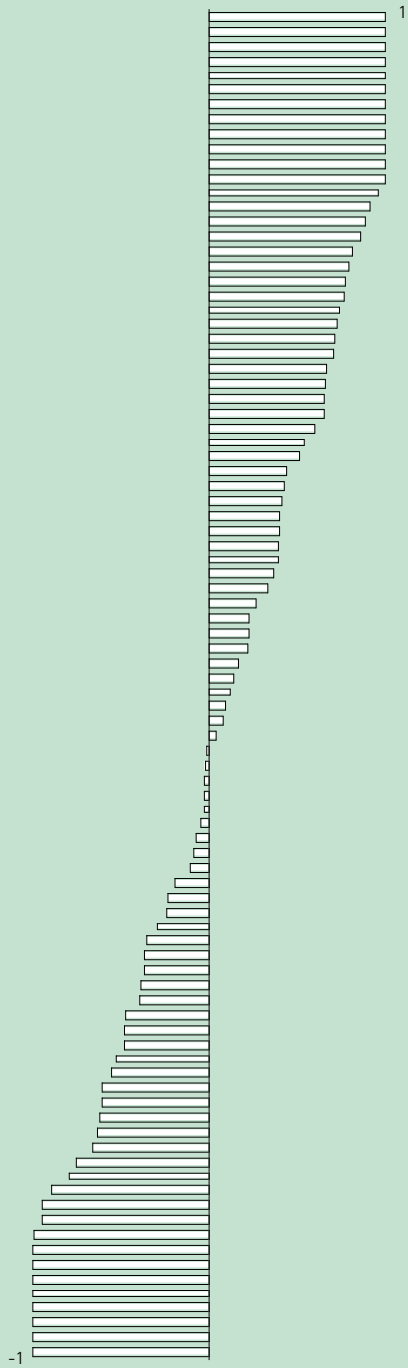
Active switching between preferred hospitals: net churn is 2% but for several hospitals it is well above 5%
 2005-2006 market score change [%]



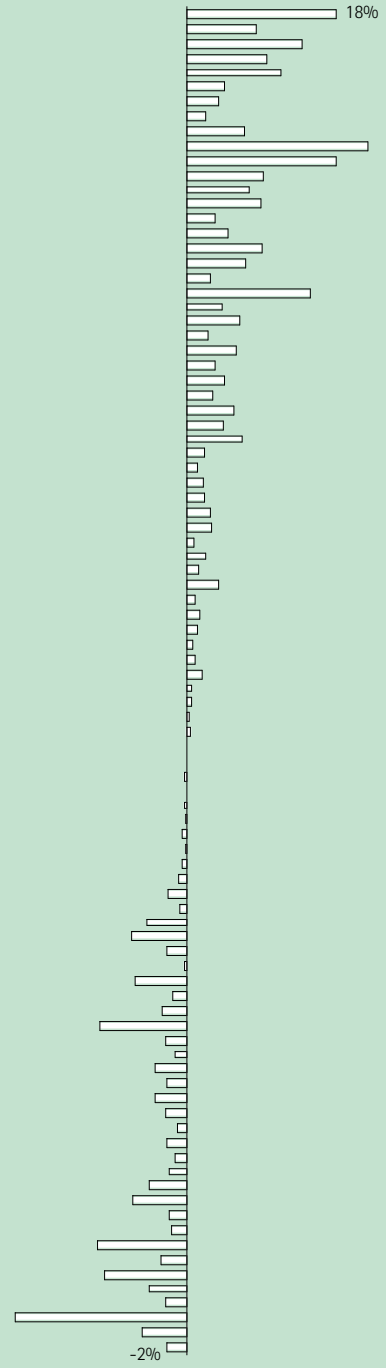
Unlike B-segment, A-segment market scores reflect both market performance and treatment mix. UMC have thus the highest scores in overall portfolio (Exhibit 10a). The variation in A-segment market score is higher, between 2,3 and 0,5.

M10c.

**For a fair group year-on-year performance is consistent:
They keep winning or losing patients**
Absolute churn/churn per hospital 2002-2006



The cumulative effects of small annual churns are large
Total net churn per hospital 2002-2006 [% EPBs 2006]



M10d.

Operational Performance

Two years on after the introduction of DBC, we continue to report the hospital performance on basis of patient entities. We are sensitive to the criticism of simplicity of patient entities as a measure of evaluating complex hospital operations. After all patient entities are based on just four general production parameters: first out-patient visits, day treatments, in-patient admissions, and nursing days.

*DBC info is
neither reliable
nor available*

The primary reason for our reliance on patient entities is banally pragmatic. DBC information is neither reliable nor available. We sincerely hope that it achieves both in the long run. Should DBCs become stable, accurate and complete we believe they should provide a better metric. However, it is not likely to happen quickly. Macro studies like this require that nearly all hospitals³ report the information in a consistent and timely fashion. DBC may be more representative of what hospitals do but the truth is it is simply not available.

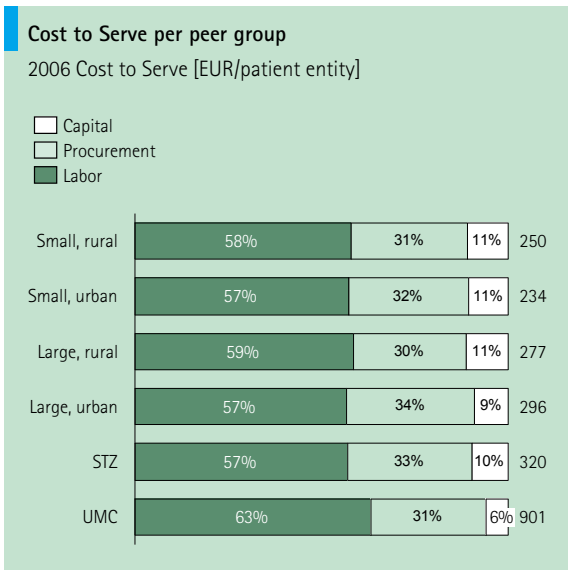
We also sincerely hope that once DBC do achieve the three goals of stability in structure and definition, accuracy in reporting by individual hospitals and completeness the information will also be made available publicly. Only then is such public study possible.

*Patient entities are
useful and shall
remain relevant for
some time
to come*

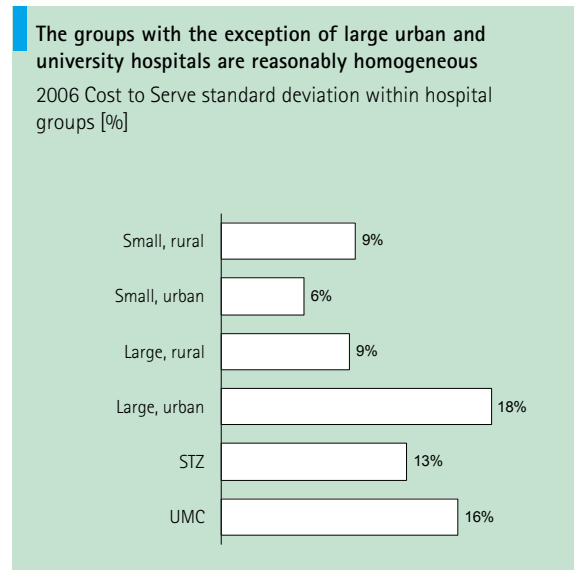
Non availability of information is not a good enough reason to push ahead with analyzing available but irrelevant information. If this was "garbage in", then "garbage out" would be the expected result. However in our project experience, patient entities do work and despite their limitations shed valuable and reliable insights on the performance of the whole sector as well as individual hospitals. The classic measures like nursing days, first visits will continue to be relevant because the day to day management of a hospital revolves around patients and beds.

³ At the time of going to press only one hospital had not published its annual report. Thus the used sources are nearly complete. In a few cases we have had to make assumptions or pose further queries to the individual hospital. Given the difficulties of achieving three goals of stability, accuracy and completeness for even patient entities after all these years suggests to us that the use of DBC as a performance monitor for a macro study is sometime away.

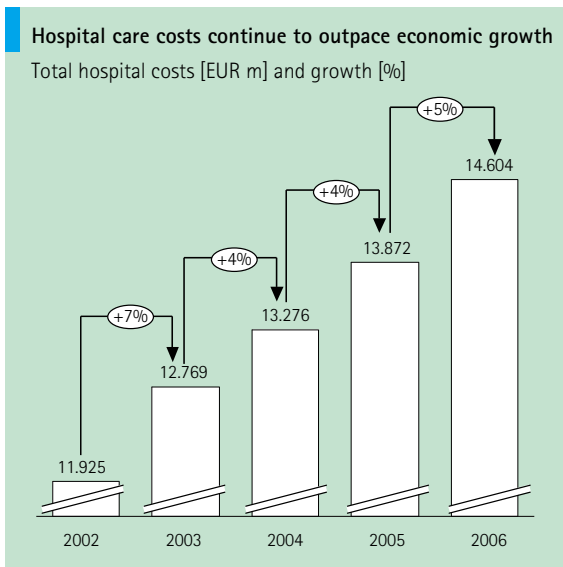
01a.



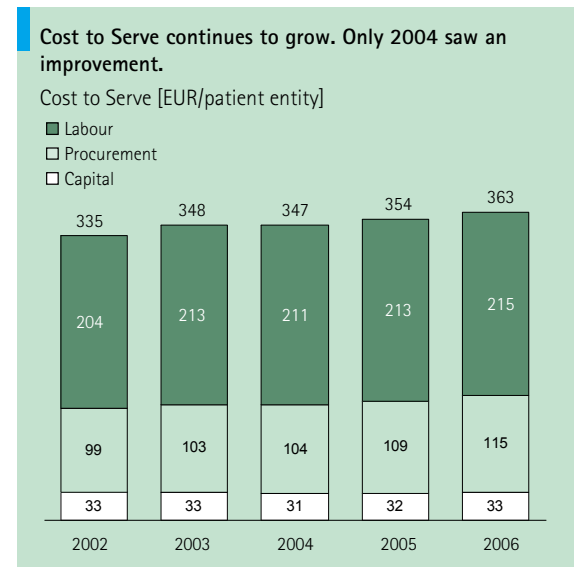
01b.



02.



03.



*Our benchmarks
are based on
6 peer groups*

It is important to set up peer baskets of comparable hospitals. We did so last year and found it useful and therefore continue to use it again. Our peer baskets are:

- Small rural hospitals
- Large rural hospitals
- Small urban hospitals
- Large urban hospitals
- Teaching hospitals (STZ)
- University hospitals (UMC)

Within the STZ group it can be important to further segment a group that has a relatively higher fraction of specialized and regulated care. Examples of this are HIV, and cardiovascular treatments. Also within STZ an urban and rural segmentation is probably relevant. However for the purposes of this study we report the STZ as one group.

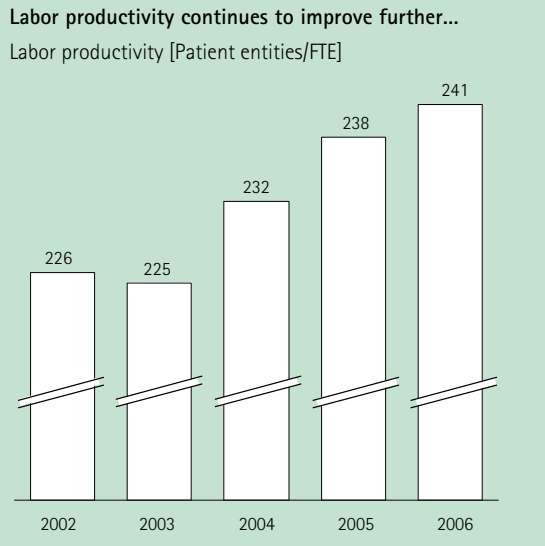
Of course no two hospitals are the same. In benchmarking one is always caught in the dilemma of constructing a group that is big enough to make comparison worthwhile yet does not compose of such diverse hospitals that a comparison is irrelevant. Based on our experience the above peer structure provides a working balance. The standard deviation within the groups is much lower than for the entire sector (Exhibit O1). Perhaps only the large urban group needs further attention, since it also consists of hospitals with diverse and specialized care profiles. It is also small in size given that most large urban hospitals have become teaching hospitals. Next year we will address this issue.

1. Cost increase higher than volume in patient entities.

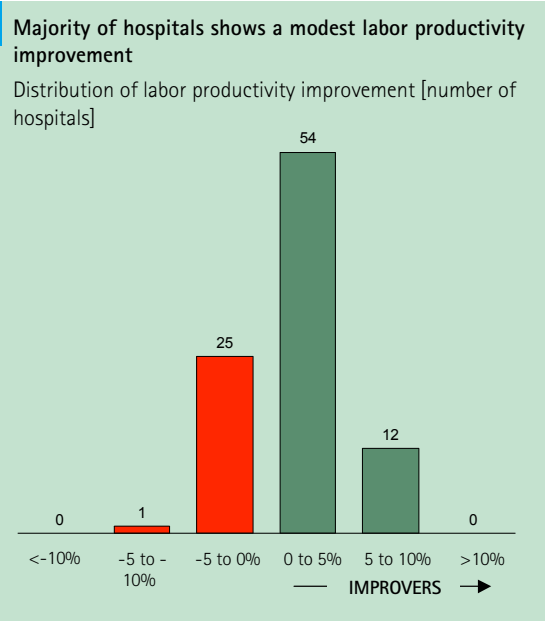
*Real cost-to-serve
increased by 1.4%*

Total sector costs grew from EUR 13.9 to 14.6 billion in 2006, a 5.3% growth (Exhibit O2). Comparing this to the 2.7% growth in patient entities implies that the costs as measured by EUR costs for each patient entity grew by 2.6% in 2006. Correcting for inflation we find that the real cost of each patient entity increased by 1.4% in 2006 (Exhibit O3). Historically the real cost-to-serve has continued to increase in healthcare. Only in 2004 for the first time in half a decade we reported that the real financial productivity had declined by 1.6%. In 2005 it was increasing again a trend that has worsened in 2006.

04.



05.



We measure and report three fundamental underlying cost and productivity drivers – labor, procurement and capital costs.

2. Marginal improvement in labor productivity.

Labor productivity improved for the third year in a row

Labor cost-to-serve is a combination of FTE productivity – the amount of patient entities per FTE – and the salary costs of each FTE. The FTE labor productivity improved for the third year in a row, albeit the improvement was declining and minimal (Exhibit O4). In the major improvement year 2004 the FTE productivity had improved by 3.2%. In 2006 the improvement was 1.2%. At least we are on the right side of improvement. Unfortunately the pace of improvement is too slow.

Extrapolation of labor requirement for healthcare shows that in a decade we will not have enough people to meet the healthcare needs of the entire population. Such extrapolations of course do not do any justice to the creativity and spirit of human endeavor. As the problem of labor shortage gets more acute, hospitals and care providers will seek and find innovative solutions. Had we all believed in Malthus's prediction we should all be dead of hunger. Hospitals however do not appear yet to be experimenting with ways to tackle this critical challenge.

Current improvement is by no measure an answer to the labor challenge

One does not need to look far ahead by a decade to understand the magnitude of the labor challenge. The issue of labor shortage is real enough in hospitals even today. The Dutch economy has picked up in the last years and labor markets have become more difficult. The challenge is to provide more care with less human intervention. This begins by removing duplication of functions, managing schedules, planning efficiently, redesigning operations, seeking scale where scale would bring efficiency improvements etc. The hospital sector will need to reinvent how care is delivered. The labor challenge dictates this painful transformation. However hospitals are evolving too slowly in the current paradigm. A 1.2% improvement in labor productivity is by no measure an answer to the labor challenge.

12 hospitals had more than 5% increase in labor productivity

It is worthwhile to look deeper at the individual hospital improvement. There are large differences among hospitals. 12 hospitals improved their labor productivity by more than 5%, a majority of 54 posted an improvement between 0-5%. 25 hospitals had declining labor productivity by up to 5%, while for 1 hospital the labor productivity declined by more than 5% (Exhibit O5). Hospitals handle their operations differently. And while some are the best in class in labor productivity, others lag significantly.

The salary costs per FTE increased by 2% in 2006. Salary differences are considerable across Dutch hospitals. The average salary cost was more than EUR 51,000 in 2006. But looking across the spectrum salary per FTE varies from EUR 44,000 to 63,000.

The combination of 2% salary increase, and 1.2% FTE productivity improvement meant that the overall real labor cost-to-serve increased by 1%.

Hospitals have in the last three years improved labor productivity. Individual department budgets are fairly transparent as to FTE. One can imagine that given budgetary pressures hospital management has reined in FTE growth per department. The same cannot, unfortunately, be said of procurement.

3. Procurement costs grew dramatically and are the main source of increasing cost-to-serve.

Procurement costs are the biggest hospital cost challenge

Procurement costs are and remain the biggest cost challenge. The procurement process is much more diffuse than personnel management. Procurement guidelines and administrative processes are usually a staff function. Many different departments may be using the same products and suppliers. The effect of procurement on budgets is not easy to decipher. To assign responsibility for what is not easy to decipher is even more difficult. As a consequence, procurement processes and budgets have not yet been professionally managed.

Dramatic increase in procurement costs

This may be one possible reason why procurement costs continue to increase dramatically in hospitals. In 2006 the procurement costs increased by nearly 6%, or 4.5% increase on a real basis. Hospital growth outstrips the growth of the economy. But within hospitals procurement costs outstrip the growth of hospital budgets.

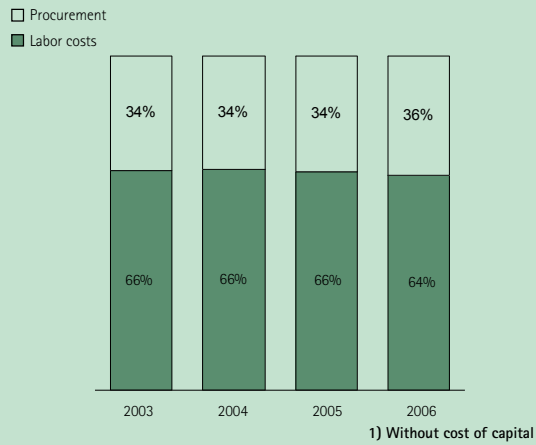
Post of the increase is legitimate...

Increase in procurement costs has many reasons. Part of the increase is legitimate in the sense that they are unavoidable on the short run. Suppliers may have a monopoly, no substitute may be possible, or new expensive products may be absolutely essential for delivering care. All of these would drive up prices beyond national inflation levels. However there are many other reasons for procurement price increases which are definitely within the control of hospital management and care providers that can and must be managed better.

06.

Procurement costs are important

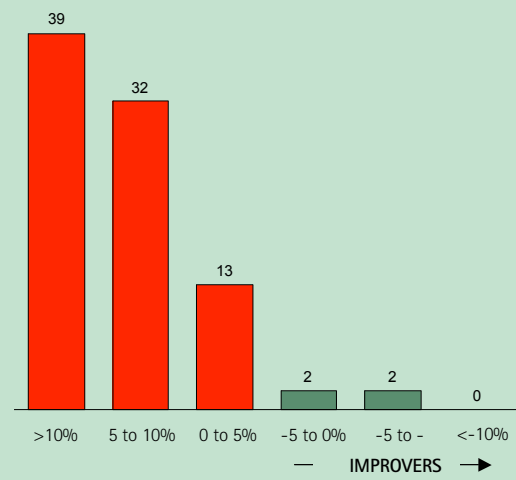
Share of labor and procurement in hospital costs [%]



07.

Only a handful of hospitals reduced procurement costs

Distribution of procurement cost increase [number of hospitals]



... but procurement costs also increase because hospitals apply little pressure on suppliers to come up with cost-efficient products and treatments ...

Before we look at these reasons it is important to understand why managing procurement matters. Labor is still the major cost driver for hospitals. Given demographic trends the labor share will continue to decline. The share of procurement shall continue to increase (Exhibit O6). Major part of the increase may have to do with new technology for treatments and outsourcing. But a significant part of procurement is just good old paper and bread, syringes and bandages, and known medicines. While healthcare providers and suppliers focus most of their energy and creative R&D on new product innovation there is hardly any effort to manage cost of traditional goods delivered. Where is the will to look cost consciously at every new product? Procurement costs increase because innovations are not evaluated as they should be based on a combination of sound medical assessment and financial business case. And because there is little pressure from the care providers on their suppliers to come up with cost efficient products and treatment strategies.

... and hospitals have miles to go before they achieve a professional procurement division

Procurement costs also sky rocket because hospitals haven't as a rule got to grips with managing the procurement process. A recent pilot conducted for 12 Dutch hospitals revealed that hospitals haven't got around to tackling fundamental strategic questions about procurement⁴. With more than a thousand suppliers and average order size of less than thousand euros, the procurement processes are extremely expensive and inefficient. A US study some time ago showed that as much as 25% of the medical procurement costs were transaction costs. If you compare this to other sectors like retail, consumer goods or automotive industry you can feel optimistic about the potential that can and must be realized in the coming years. To do so however management must make procurement a top priority. We still await the first hospital board member (let alone CEO) that made her career via procurement.

Waiting for the first procurement manager who got promoted to the hospital board

Procurement will remain a fine balance between managing costs, service level desired and speed of innovation. It is not possible to optimize all three dimensions for all products. Hospitals must breakdown their procurement portfolio and prioritize each product and supplier along these three dimensions.

Only 4 hospitals reduced procurement costs ...

Looking at individual hospitals, only 4 managed to reduce their procurement costs. Of these, 2 hospitals reduced their procurement costs by more than 5%. Perhaps these hospitals have placed procurement high on their strategic agenda? If so, it shows it is possible to manage procurement. Unfortunately for many hospitals, a total of 39, the costs increased by more than 10% (Exhibit O7)

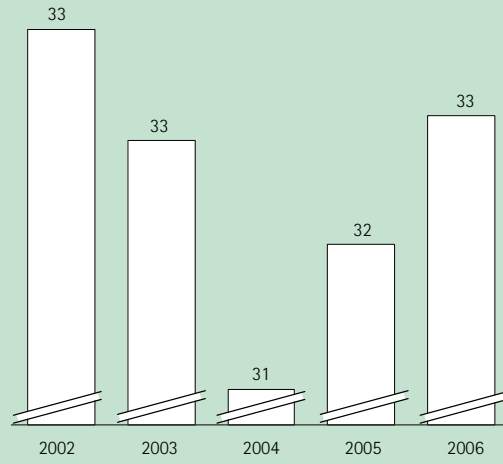
... for 39 hospitals more than 10% increase in procurement

⁴ See Sneller Beter.

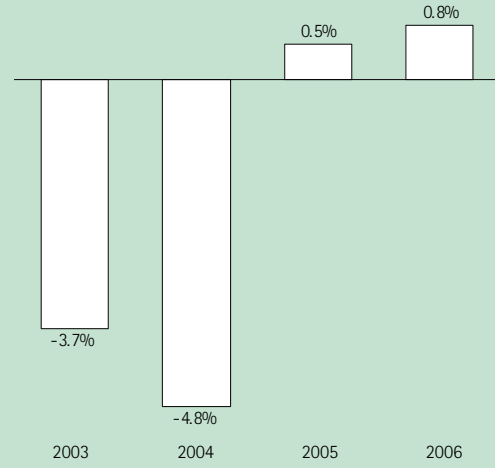
08.

Cost of Capital is on the rise again..

Cost of Capital [EUR/patient entity]

**.. and the growth is picking up speed**

Annual cost of capital growth [%]



4. Cost of capital increased and shall become more important.

Cost-of-capital is increasing...

The capital costs of hospitals increased in 2006. Capital costs are small (less than 10%) but increasing (Exhibit O8). The strategic impact of capital costs shall become more important. The current increase in capital costs is misleading. The underlying increase is probably much larger. The extraordinary surplus financing of hospitals by insurers has meant that they have significantly managed to reduce their interest costs. However we would expect that this effect disappears as the mark ups are adjusted to levels justified by the underlying FB-budget. But at the same time many hospitals can still save interest costs if they manage their billing better (Exhibit F9).

... and will become even more important given deregulation

Cost of capital shall also become important for a very different reason. Despite the uncertainties, VWS has recently announced the intention to delegate the responsibility of making investment and the concomitant risks to the individual hospitals from 2009. No longer are hospitals bound by a time consuming, cumbersome and "dead on arrival" process for building a new hospital or making a significant investment.

Freedom to choose should improve investment benefits

This freedom to invest may unleash a medical arms race. But it may also distill financial discipline and rigor in the investment decision making process. As long as the hospitals manage their investments well they should avoid unnecessary investments with poor business and medical benefits but continue to make innovative, timely and individual specific investments that would enhance their reputation and benefit the community they serve.

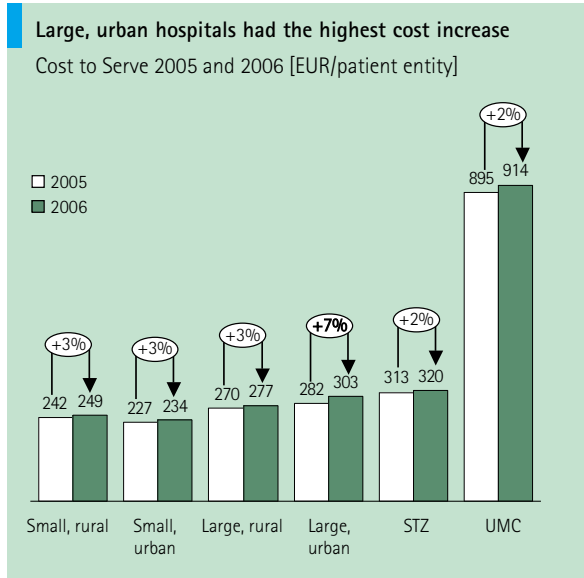
5. Large urban hospitals have high procurement costs and rising cost-to-serve.

At the end of this chapter on operational performance we look at the developments between the six peer groups. Comparisons within the peer groups are more relevant. Part of the differences within the STZ and the UMC groups can be explained given the different profile and size. The differences within large urban also have to do with the profile of some of the hospitals, that is, the rather large levels of top clinical care some of these deliver in their communities. However there is potential to improve efficiencies and reduce the large cost differences.

Large urban hospitals suffered higher cost increase

Looking at the six groups the large urban hospital peer group stands out. The costs of large urban hospitals increased most in 2006 (Exhibit O9), and their current costs are rather high. They have the largest procurement costs of all groups at 34% (Exh. O1a).

09.



Small urban hospitals are cost-competitive.

The small urban hospitals appear to be most competitive on costs. This may of course be a combination of profile simplicity, competitive pressure which provides the opportunity to divert more complex care to other nearby larger hospitals in urban communities.

Perhaps due to simpler profile and competitive pressures

Smaller hospitals are more efficient as a group but we suspect this might have just as much to do with their profile as with efficient operations. The current winds of wisdom in the Netherlands seem to favor small hospitals and are against mergers and partnerships. The current political flavor is a small, efficient hospital. However, analyses and experience does not bear it out. Scale brings economies in the back office. But scale also improves volume of individual treatment provided by a practicing group. Volume and scale are also necessary for the professionals to develop their practice as treatments get increasingly more complex. Both the depth and breath of operations demand scale. Thus we expect that hospitals will continue to seek scale and mergers and partnerships will evolve. Provided they are managed well this should be welcome.

Seeking scale will continue to be important

In summary, in 2006 hospital costs continued to increase faster than production. Procurement costs grew the fastest and at 6% the increase was a factor four higher than general inflation.

Financial Performance

Costs dominate the hospital budget discussions...

In theory the financial health of Dutch hospitals ought to be improving since they are in transition from a regulated healthcare regime to a free market regime. In a regulated regime a (government) body pays and dictates who provides which type of care. Given both the delivery and payment dependencies, it is basically a cost based system. There is no obvious motivation to make a profit and on the flip side of the same equation to manage costs. And certainly there is even less motivation to build own equity. A hospital manages its operations on cost basis. It regulates the amount and quality of care it delivers to meet budget targets. In practice both budget and delivery targets can be imposed. In reality cost dictates behavior, since costs are both easier to measure and to monitor. Also, a cost target is the only one that fits with the targets of other government ministries. Perhaps the following example will help understand how costs dominate the discussions in such a system. A Ministry of Healthcare can impose cost, delivery and quality targets on all hospitals. However, the Ministry of Finance is probably only interested in all other Ministries meeting their cost targets. At the level of taxation it is also difficult to convey the value of healthcare delivery and quality to justify a tax increase. All discussions thus degrade to a one-dimensional cost discussion. While in practice a battery of well meaning Ministry of Healthcare's smartest brains can be working with the smartest brains of the hospitals to develop quality targets, usually at the end of the year it comes down to very simple and crude hundred million euros less or more.

... even though quality is very important

In such a regulated system there is little incentive for hospitals to innovate. There is even less incentive to seek patients who need healthcare. After all there are usually no financial rewards for doing so, while there are usually heavy financial penalties for seeking uncharted waters. Bookkeepers as a rule are good managers of such regulated hospitals.

Dutch hospitals are in a transition from cost based to performance based systems

Dutch hospitals are apparently in transition from such a regulated regime. The transition is supposed to bring them to a more entrepreneurial environment. In the new (partially) liberalized system Dutch hospitals should have stronger incentives to innovate. Hospitals should feel strongly driven to improve both healthcare processes and products for the benefit of the Dutch patient who shall reap the rewards of this entrepreneurial drive. The new system is supposed not to be cost based but performance

F1.

Total hospital revenues grew at 5%

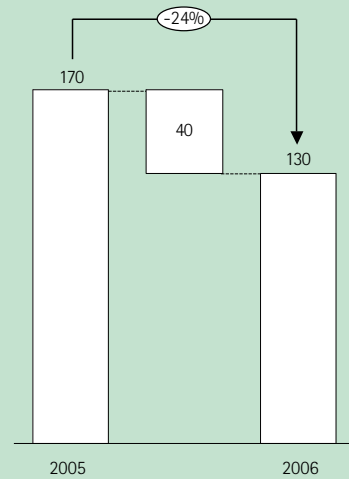
Revenue Dutch hospitals [EUR m]



F2.

Total hospital profits tumbled

Earnings Dutch hospitals [EUR m]



based. Hospitals ought to get paid for the healthcare they deliver, not the costs they make in providing healthcare as defined by a third parties⁵.

*Delegate
decision making
to individual
hospitals and
insurers acting
on behalf of their
customers*

The wisdom of such a system is generally well recognized in most sectors and countries. It is hard to find many people who would hanker for the good old days with the dominant Ministry of Telecom or for countries where the government runs the entire economy. Healthcare is meant to benefit from a similar liberalization in the Netherlands. The decision making is to be delegated to the individual hospitals and their insurers who, acting with the insured patient as the true measure, would make the necessary decisions to improve healthcare.

*Entrepreneurish
is about taking
risks ...*

Entrepreneurial healthcare is like all other enterprises about taking risks. There are no guarantees that the patients would appreciate the innovations and are willing pay for them. There are even no guarantees that what hospitals and doctors would dream up as innovation would be always beneficial. There would be no budgets and no re calculations of budgets. It would be much less about FTE and much more about patients.

In such an environment hospitals would need to take risks. Taking risks means investing time, energy and money, and not knowing fully the results. In such a system bookkeepers are no good as hospital CEO's since they have an aversion of risks.

*... and risks require
financial reward*

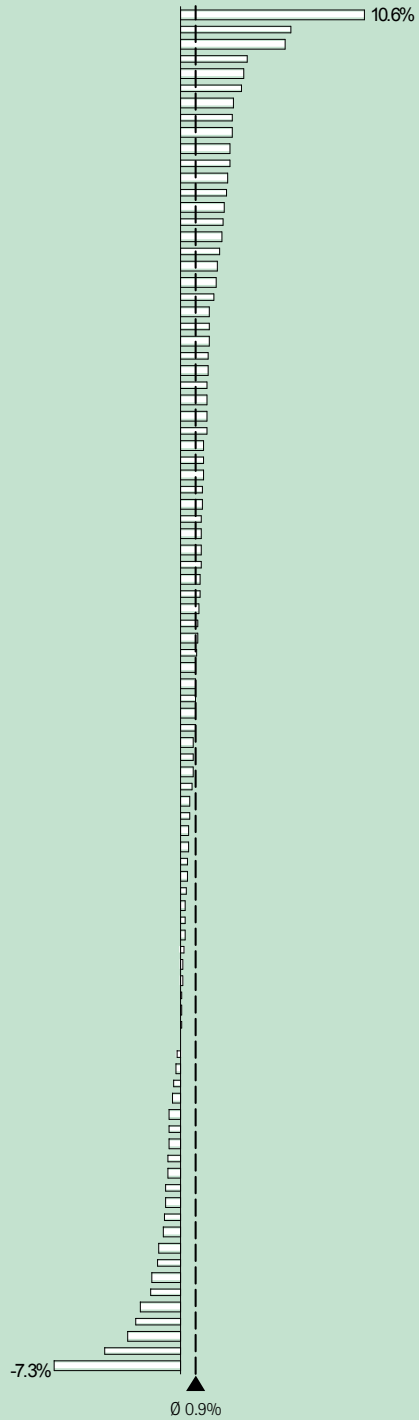
In a liberalized system hospitals would be allowed to make profit and do what they deem fit with profits and build financial buffers like equity. Why is the freedom to make profits and build financial buffers intrinsically linked to taking risks? Think of it in terms of building ships in 1600's and sailing around the world in search of yet unknown countries for spices and other goods that one can sell back home. Building ships requires money. But equally important is finding a captain and crew that are willing to sail across the world. The ship owners need to have the freedom to seek the crew and reward the crew as deemed fit. The countries they will find are far away, the goods uncertain, the time it will take to get back is unknown, and the profits the ship owners hope to make is large but uncertain. Yet ship owners and crews undertook such strange adventures, in search of uncertain profits. The great Dutch miracle in the golden

⁵ This requires sufficient competition so that the innovators can only command a premium till such time that other hospitals spread the innovation.

F3.

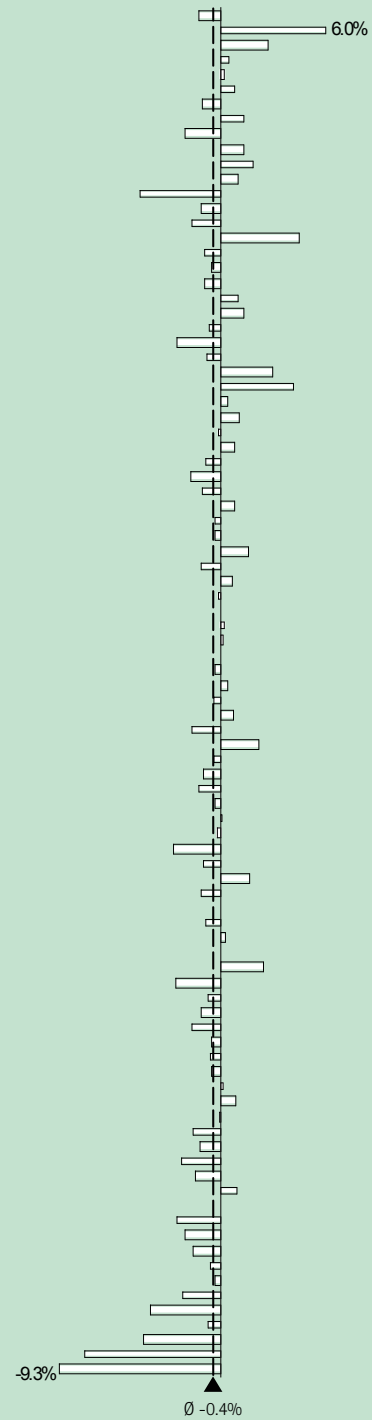
Some hospitals manage their profitability better than others

2006 Profitability of Dutch hospitals [% revenues]



... but performance changes significantly within a year

2005-2006 Change in profitability Dutch hospitals [%]



Unleashing entrepreneurial drive in hospitals in like the sailing around the world in the Dutch golden age

age laid the foundation for much of the prosperity that has followed since. Unleashing entrepreneurial drive in the hospitals is not much different than creating the conditions that unleashed the great commercial instincts in the Dutch golden age.

The financial reward, much like costs, tends in reality to dominate most decision making processes. And an essential ingredient of liberalized healthcare was to allow hospitals to have financial degrees of freedom; to make profits and build equity. It is not that liberalization does not come with risks. It is much more that the benefits must outweigh the risks.

In theory Dutch hospitals are in getting ready for a risky but profitable voyage

In theory, the Dutch hospitals are in such a transition phase. In theory thus they ought to be increasing their profitability to build up their financial reserves so that they can undertake new voyages. The aim of such voyages may well be profitability but in the long run the entire society would also benefit by getting better healthcare at lower relative costs.

In reality the preparations are proceeding very poorly

In practice we find the opposite in 2006. The profitability of Dutch hospitals continues to erode. Even without the budget cuts that are announced and will be deducted later, the profitability of Dutch hospitals plummeted in 2006. As a consequence of this low profitability the equity of the hospitals is still much too low to undertake any serious, risky voyages.

The poor profitability and meager equity of hospitals means they are even less prepared to operate in "freer" healthcare markets. We shall return to the reasons for this and the problems it brings, as well as potential solutions at the end of this chapter.

**1) Cost increase higher than turnover (profit erosion).
Spread in profitability increasing.**

The turnover of Dutch hospitals grew by 4.9% or EUR 0.7 billion to EUR 14.7 billion in 2006 (Exhibit F1). However the earnings tumbled to EUR 130 million, a drop of EUR 40 million or 24% compared to 2005 (Exhibit F2). The average profitability in 2006 was just under 1%.

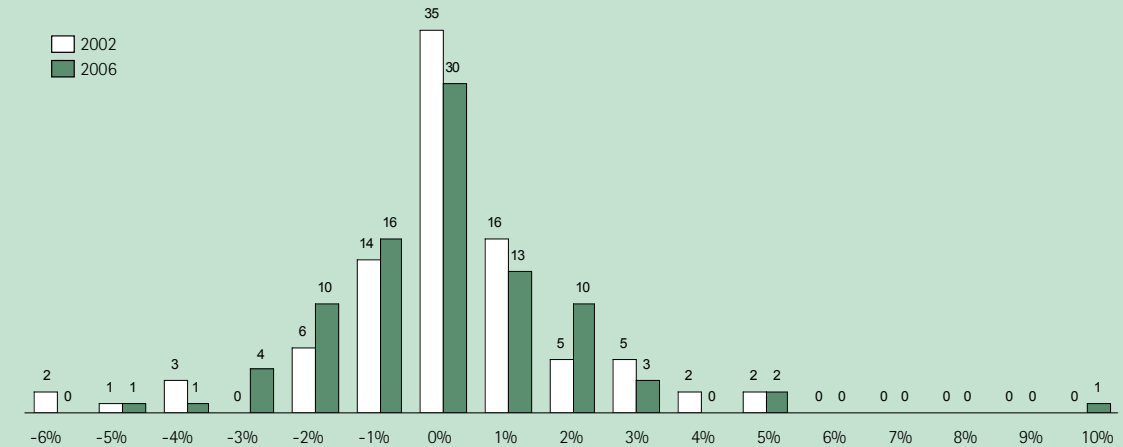
Total profitability declined ...

At an average profitability of 0.9%, Dutch hospitals fit better in the old, regulated, cost based system rather than the new entrepreneurial risk and reward based regime. Yet it is

F4.

Spread in profitability in Dutch hospital sector increased between 2002 and 2006

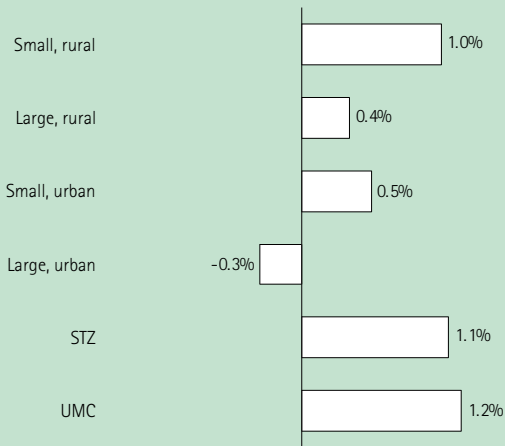
Distribution curves of profitability development [%]



F5a.

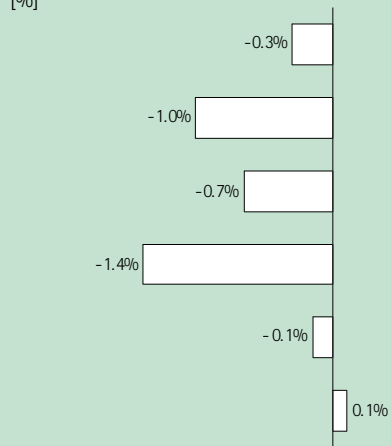
Profitability across peer groups differs significantly

2006 Profitability of hospital peer groups [% revenues]



Profitability decreased across the board except for UMC's

2005-2006 Change in profitability of hospital peer groups [%]



F5b.

*... and spread
in profitability
increased*

not as though the signs of a transition are completely absent. The spread in profitability across the sector is an indicator of the transition. In 2006 the bandwidth of profitability of hospitals was stretched from +10% to -7% (Exhibit F3). Looking over the years we note that the spread in profitability is increasing. Average profitability decreased by 0.4%, but there are a few hospitals with high and increasing profitability, and at the same time there are also hospitals with significantly deeper financial problems (Exhibit F3 and F4).

*A lose-lose
situation in the
making*

It would seem to us that we have a loose-loose situation in the making. In the transition phase we appear not be capturing the benefits of liberalization. One benefit that is eluding the sector is that the total financial health of all hospitals is not improving. Profitability levels have nearly halved in the last two years. The underlying profitability is even significantly lower, an issue we will discuss further below. At the same time we do seem to be capturing the apparent disadvantages of liberalization. One disadvantage is that the performance differences between hospitals are becoming painfully manifest.

2) Only University hospitals improved their profitability in 2006.

*Most hospitals
saw profitability
erode. Large urban
hospitals suffered
worst losses*

In 2006 56 hospitals reported lower profits while 36 improved their profitability compared to 2005. The highest improvements were around 6%, while the worst decrease in profit was nearly 10% (Exhibit F3).

Looking at profitability within the six peer groups, the large urban hospitals are financially the most vulnerable group (Exhibit F5). The 6 hospitals in the large urban group, made on an average a loss of 0.3%. The large urban hospitals also suffered the largest decline in their profitability (-1.4%). All peer groups saw their profitability erode in 2006, except University hospitals (UMC).

*Only UMC group
improved their
profits*

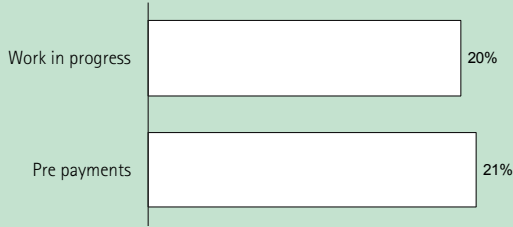
University hospitals improved their profitability marginally by 0.1%. Teaching hospitals (STZ) suffered the least damage to their profitability (-0.1%). All other groups had significantly lower profitability in 2006.

University, Teaching and small rural hospitals were the most profitable in 2006. For the university and teaching hospitals their unique product proposition and for university hospitals separate financing may explain the advantage. For small rural hospitals it is possible that lack of competition may help in maintaining profitability. It is interesting to

F6.

Insurers completely financed work-in-progress

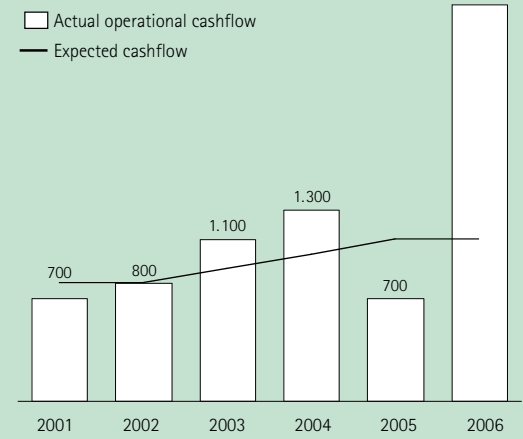
2006 Work-in-progress and insurer prepayments [% revenue]



F7.

Hospitals received twice the expected cash in 2006

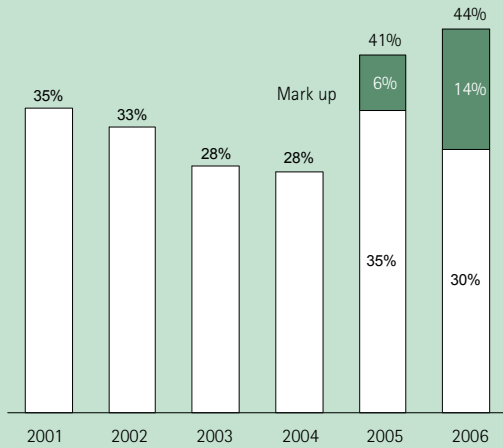
2006 Actual operational cash flows and expected cash flows from profit and depreciation [EUR m]



F8.

Because of markups in 2005 and 2006, current assets increased

Total current assets of Dutch hospitals [% of revenues]



Unique products and lack of competition appears to enhance profitability

note that similarly small hospitals operating in urban, competitive settings have lower profitability. The possible relation to competition and profitability is also confirmed between large rural hospitals and large urban hospitals. Here again the hospitals operating in competitive urban arenas make a loss while hospitals in less competitive rural setting made a small profit.

The poor profitability is a clear and present danger. With 22 hospitals making a loss, and average profitability at 0.9%, the sector is poorly prepared to handle risks. In our analyses we find that the underlying profitability of Dutch hospitals is even lower. But to estimate the underlying profitability we first need to analyze and discuss the cash flow of hospitals, how introduction of DBC has changed it, and how it affects their profitability.

3. **Dutch hospitals have enjoyed a large windfall from extraordinary levels of surplus financing due to mismatch between old FB and the new DBC based pricing (markups). Correcting for the windfall we estimate that the profitability of the sector has nearly halved in 2006 to 0.6%**

Actual cash flow of hospitals double to that expected

Dutch hospitals have enjoyed an extraordinary level of surplus financing in 2005–2006. We estimate that EUR 3 billion surplus and pre financing was made available to the Dutch hospitals in 2006 (Exhibit F6). As a consequence of this, the cash flow of the entire sector was more than double what one would expect based on profit and depreciation (Exhibit F7).

Due to DBC there are markups and ...

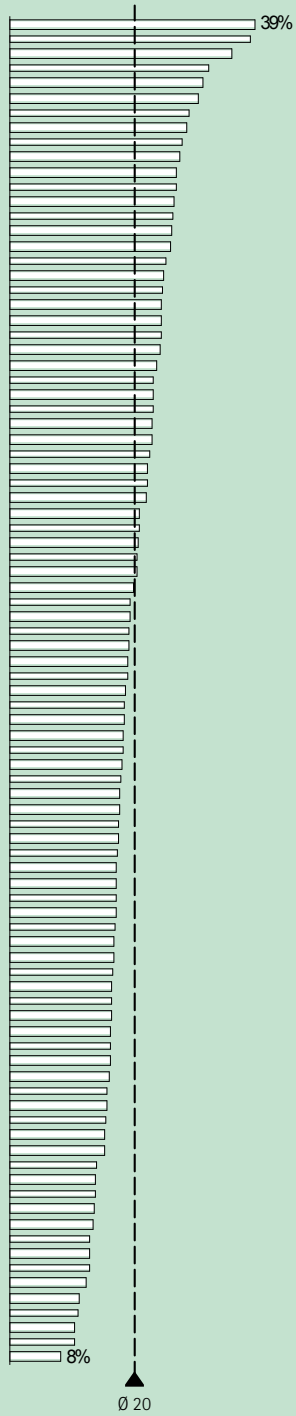
The surplus and pre financing was arranged to shield hospitals from DBC problems. The pre financing covered the work in progress. Whereas surplus financing was necessary since DBC based budgets did not match the old FB budgets. Guidelines were in place for insurers and hospitals for both surplus and pre financing. Markups⁶ based on sector wide averages were applied to all hospitals (Exhibit F7/8) to determine the surplus financing. The size of current assets of Dutch hospitals increased again after years of decrease because of these markups (Exhibit F8). The markups are based on estimates of the difference between the previous FB based budgets and the new DBC based budgets.

... due to markups current assets are much higher

⁶ Markup is here used to define the theoretical difference between the historical FB budget and the DBC estimated budget.

F9.

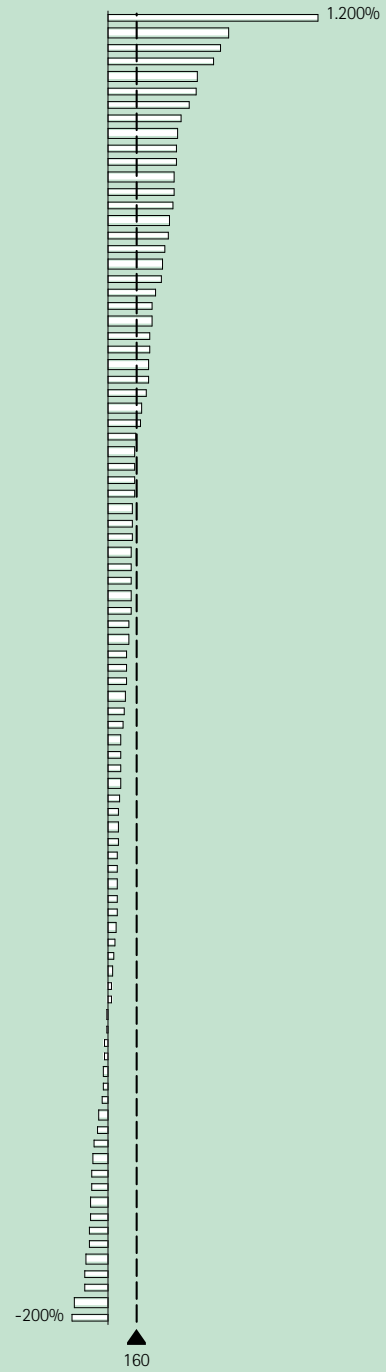
Work-in-progress differs between Dutch hospitals
 2006 work in progress Dutch hospitals [% revenues]



F10.

Dutch hospitals have large differences between expected and actual cash flow

2006 difference between operational and expected cash flow
 Dutch hospitals [% of expected cash]



To estimate the difference in budgets first an estimate of DBC production needs to be made. In as much as the actual production of the hospitals differs from the estimation, hospitals have surplus financing and extra cash flow. Also hospitals that are better at billing their DBC can reap the benefits of surplus and pre financing.

Hospital performance varies and therefore ...

The introduction of DBC is a complex operation. The mark ups, pre financing, cash flow and profitability of the hospitals prove how difficult it is for the government and their agencies (NZa) to accurately estimate and regulate the changeover. The major consideration often ignored is that hospitals are very different in their case mix, but also in their ability to run their operations. A good example of this is the work in progress of hospitals. This reflects a combination of their case mix and administration efficiencies. Hospitals with simpler DBC and well oiled administrative machinery would accurately open, close, validate and timely bill the DBC. Their work in progress would be low. Others due to either more difficult, longer, poorly defined DBC, or due to poorly functioning administrative processes would have much higher work in progress. The difference between hospitals in work in progress is 39% to 8%. That is, there are hospitals with nearly 40% of their turnover as work in progress while others have brought it down to less than 10% (Exhibit F9). The average work in progress was 20% in 2006. Such huge differences make it impossible to work with sector wide averages.

... the work in progress varies widely per hospital and...

... the difference between operational cash flow and expected cash flow per hospital is gigantic

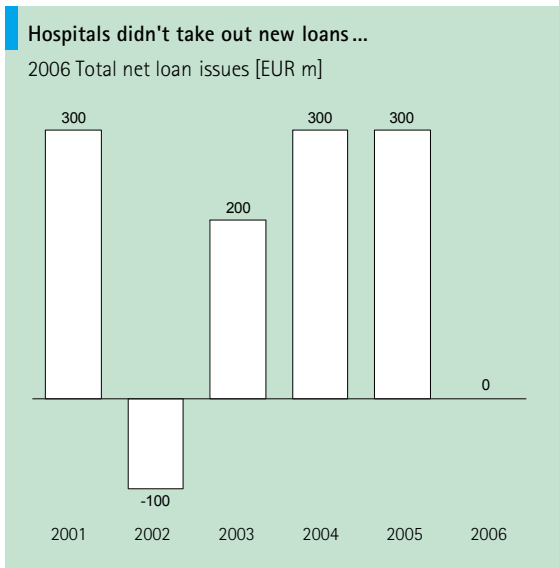
The average work in progress was broadly in line with the pre financing (Exhibit F6). The differences between hospitals were significant (Exhibit F9). None the less, due to surplus financing the actual cash flow of hospitals was much higher than the expected cash flow based on profit and depreciation.

The cash flow of hospitals was EUR 2,700 million in 2006 (Exhibit F7). This is more than twice the cash flow one would expect based on the profit and depreciation. The difference between actual and expected cash flow was 160%. The difference per hospital between the actual and expected cash flow was even more staggering. There were hospitals whose actual cash flow was more than 10 times the expected cash flow, while for others it was -200% (Exhibit F10).

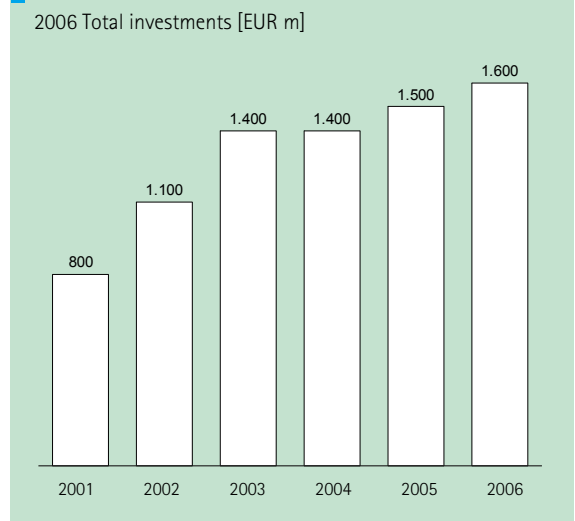
What does extra cash flow imply for profitability? If extra cash was lying "idle" it would of course not mean anything. But had hospitals loaned the money to the best hedge funds in 2006 and exited in time they could have made as much as EUR 1 billion extra profit⁷. To put this in perspective, the total profit of the sector in 2006 was EUR 130

⁷ Based on the assumption that hedge funds make 100% profit on an annual basis

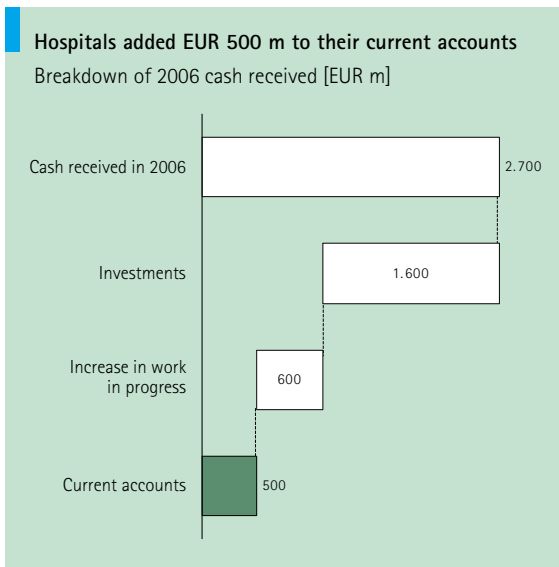
F11a.



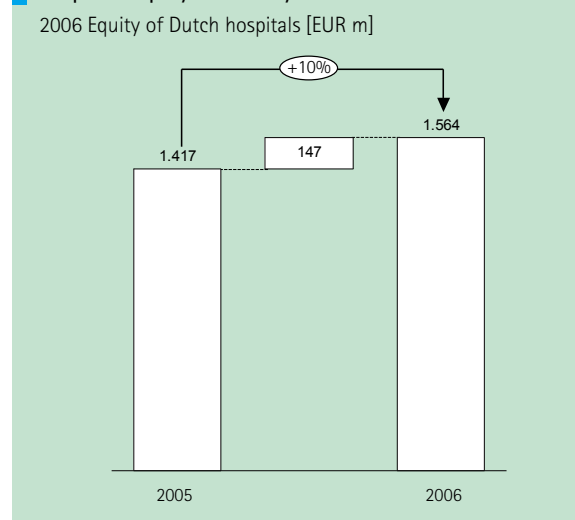
F11b. ... despite heavy investments



F12.



F13. Hospitals' equity is still very low



million. Thus if the sector had been working at the cutting edge of finance in 2006 they could have increased their underlying profit in 2006 by as much as a factor of 10.

Due to extra financing hospitals profited

Of course hospitals are conservative organizations dedicated to providing healthcare in their community rather than buccaneers of haute finance. Thus luckily they did not invest their extra cash flow in hedge funds or private equity. But they did gain from this extra cash flow. Despite making heavy investments in 2006, hospitals did not take out new loans (Exhibit F11). After correcting the difference between actual cash flow and expected cash flow for investments, additional loans and work in progress we find that hospitals added EUR 500 million to their current accounts (Exhibit F12). It is now possible to estimate the "return" from the additional cash flow as a consequence of pre and surplus financing of hospitals. We used a conservative service rate on the loans and estimate that EUR 40 million profits were due to the extra cash available to hospitals.

The 'underlying' profitability of hospitals is much worse (0.6%)

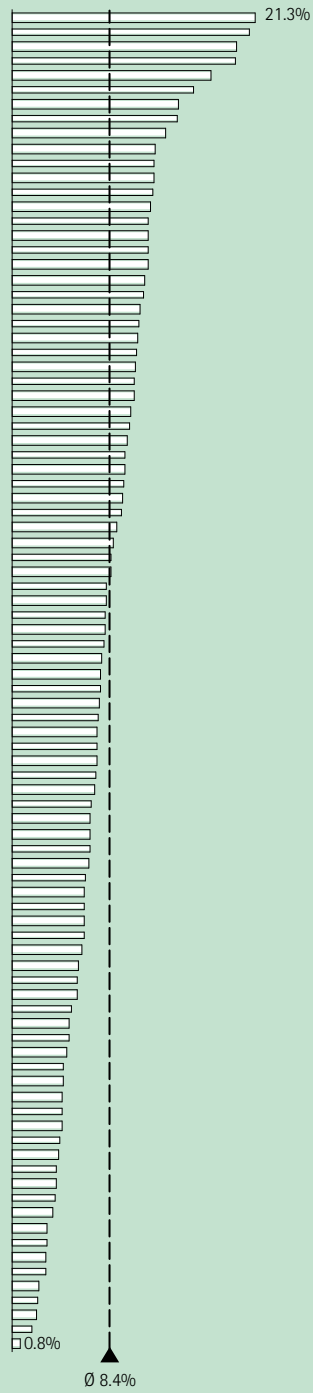
Correcting for the "unintended" windfall of EUR 40 m from the extra cash we estimate that the underlying profitability of Dutch hospitals was only 0.6%. This puts the "underlying" profit at EUR 90 m. This would mean that the profitability of the sector has nearly halved from EUR 170 million in 2005 to EUR 90 million in 2006. For a sector that turns EUR 15 billion over, grows at 5% a year, and most importantly must carry both the delivery and financial burden on its own shoulders, it is critical that it navigates out of the current financial doldrums. Relating this level of profitability to the journey hospitals are making, it is fair to say their performance is stuck squarely and firmly in the old regulatory cost plus regime. And rather than making progress forward, they are slipping further away.

At such low profits hospitals are not ready for liberalized markets

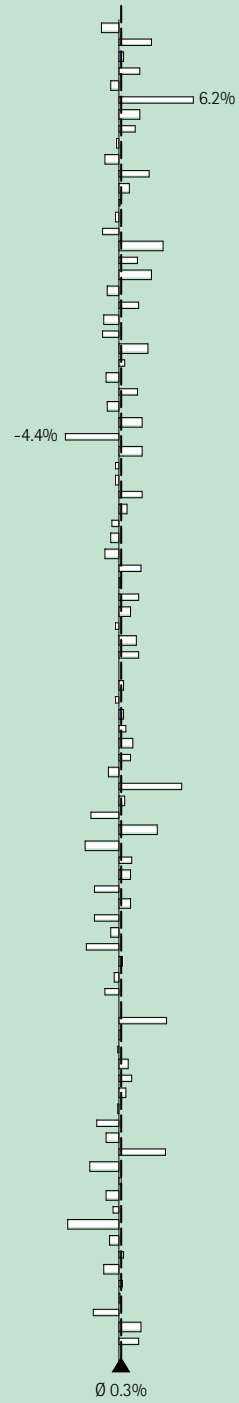
The inaccuracies in shifting to DBC and pre and surplus financing associated with it have worked out in favor of hospitals in the short run. But these inaccuracies reflect a fundamental risk. For example the proposal to introduce yardstick competition based on nation wide hospital DBC averages sends an administrative shudder down our analytical spine. Unlike markups, yardstick competition is meant to reflect the underlying cost effectiveness of hospitals. It is proposed to base yardsticks on DBC but then these need to be absolutely accurate. In case of financial difficulties hospitals in a yardstick regime should not be rescued otherwise there is no motive to improve performance. But if the

F14.

25 fold difference in equity between hospitals
 2006 Equity per hospital [% of total balance]



Average gain is negligible but significant gains and losses for some hospitals
 2005-2006 Change in equity of Dutch hospitals [%]



Given the DBC inaccuracies yardsticks cannot be based on DBC yet

current inaccuracies in DBC are 20% of the turnover, as our pre and surplus financing analyses suggest, with much larger individual differences, then DBC are simply not suitable for determining the yardstick. Even with 25/75, 50/50 and 75/25 proposed phases in yardstick regime the effects could still be disastrous for individual hospitals in the first year. Consider the first year scenario of 25% exposure to the yardstick. If of this for a hypothetical hospital 10% needs to be trimmed, 2.5% of the turnover is at stake. But should 20% of the DBC estimation be inaccurate, as mark ups suggest, the inaccuracy in estimation is twice the level as the targeted operational efficiency. For many hospitals we suspect that the inaccuracies in DBC are of the same order of magnitude or higher than the proposed efficiency gains. With no financial buffers such yardsticks would land many hospitals in financial trouble. If the agencies cannot securely distinguish between the two – potential for operational improvement and DBC inaccuracies – then there is no valid ground for introducing a DBC based yardstick regime. Correctly and justifiably, the government has delayed introduction of yardstick based on DBC till such time that the DBC are stable and an accurate manifestation of the underlying performance.

- 4. Negligible improvements in equity. Hospitals with lowest equity have also the lowest profitability. A group of 17 hospitals is in financial "red zone". A diverging group of financially healthy and financially vulnerable hospitals is emerging.**

Low equity but huge differences

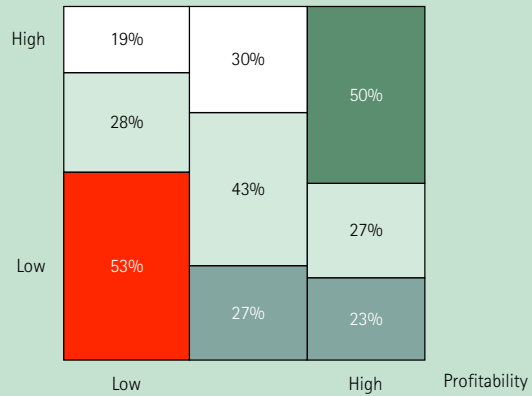
As a consequence of limited profitability, only marginal equity gains were booked in 2006. Total equity in the sector improved to EUR 1.6 billion (Exhibit F13) but at 10% of turnover is still very low. As a % of total balance, the equity of the hospital sector is just above 8%. The improvement since 2005 is negligible at 0.3% (Exhibit F14). There is of course no magical target for equity as a ratio of turnover or balance. The ratio varies per sector and per institution. It is important that the level of equity or financial buffer is in line with the risks to which the sector and the individual hospital are exposed. We have analyzed and elaborated on the risk and equity profile in our previous study 'Van kapitaallusten naar kapitaallasten'.

Looking at individual hospitals we note that the equity spread across hospitals is also large. The most financially solid hospital had more than 20% own equity on the balance. Worryingly the financially most vulnerable hospitals had less than 1% of equity on the balance sheet.

F15.

Majority of the hospitals with low equity also reported low profitability and vice versa

2006 Profitability versus equity [% of all hospitals, each column 100%]



17 hospitals are financially very weak

We analyzed the combination of equity and profitability of individual hospitals to screen out the weakest from the strongest. Hospitals with both low profitability and equity form the weakest and most vulnerable group. For this group, both the current operations are unsustainable and the balance sheet is weak. Worryingly enough, most hospitals who made a loss in 2006 also have a very low equity (Exhibit F15). Looking at the lower left corner on this 3x3 matrix, 17 hospitals had both below par profits and below par equity. This group is clearly in a financial red zone and forms the weakest group of hospitals financially.

While another hospital group is financially much healthier

In contrast we also draw your attention to the upper right corner. This group has both the highest profitability as well as the largest equity. Instead of an equitable distribution, many hospitals are clearly either financially weak or financially strong. The picture that emerges is consistent: a group of financially healthy hospitals are distancing themselves from another group of financially vulnerable hospitals.

5. Heading for troubled waters.

Risks and pressure on hospitals is increasing while they are ill-prepared to handle these

The average improvement of 0.3% in equity on balance tells its own sad story. The sector may be in a transition theoretically. In practice it is standing still, or as profitability development would suggest slipping backwards. The risks of the sector are increasing. The budget systems are slowly eroding and the pressure to perform on hospitals is increasing. The two main payers for hospitals shall remain government and insurers. The insurers are nearly all making significant losses. Fairly quickly the insurers would need to mitigate these losses. The premiums would need to go up significantly. And the hospitals would come under further price squeeze. On the government side it is important to note that three quarters of all healthcare expenditure is still financed out of government budgets. These budgets are under pressure. The healthcare growth outstrips the government budget, even in booming economic times. This implies that constantly resources need to be diverted to healthcare. With other social priorities screaming for attention, healthcare would continue to feel the pressure of budget cuts. The cuts would make the hospitals even more vulnerable.

At the same time that hospitals are heading for financially turbulent waters, the regulated parts are being downsized, the less regulated parts are being expanded and thus overall financial risks increasing. Among risk expansion the B segment shall be

Financially weak hospitals face unpleasant choices...

doubled next year. The deregulation of investment decisions and financing is in making as of 2009. Given that new housing carries a debt burden of around the turnover, while the balance sheet of hospitals is wobbly at best, it is easy to conclude that hospitals are heading for turbulent financial waters. It is likely that more and more hospitals will face financial problems and will need to make unpleasant choices. It is likely in some hospitals services and care profiles maybe rolled back. Should it continue like this it is also likely that financial injections maybe needed for some hospitals.

... and their community faces unpleasant choices

A financial injection to "rescue" distressed hospitals is against the spirit of the deregulation transition ongoing in the Netherlands. Given popular reflexes it is likely that opponents of the current reform would claim that such injections are proof that healthcare cannot be trusted to free markets. However, that is confusing cause with effects. So far there has been little room for hospitals to benefit from innovations given capped budgets and budget cuts. Yet the risks have continued to increase. This is more like a double whammy, where if you are a hospital you get confronted with the worst of both regimes.

Dutch healthcare reform is a trail blazer

All of this would not be an issue if the end game was obvious and not in doubt. The Dutch ministry has shown both remarkable intellectual stamina and courage. Nearly all Western countries are caught in a dangerous time wrap when it comes to healthcare. Solidarity, that is, equality and completeness of coverage, is the norm. As a goal solidarity is commendable. It is a proud legacy of the last half century of social and economic development in Europe. Most West European governments can successfully look back and feel justified in their policies. We have fantastic and equitable healthcare.

Unfortunately, it is impossible to see how such a system can survive another decade or two. The growth of healthcare well above economic growth makes a centralistic approach impossible. And yet both on demand side, what patients expect, and on capacity side, what is possible, the growth continues relentlessly.

The Netherlands has developed its own unique healthcare legacy in the last half a century. In the opening of the chapter we described the two extremes of a cost based and performance based system. In reality, Dutch hospitals don't fit well in either extreme since we are unique in having all private, not-for-profit hospitals. In other countries public hospitals, directly owned and managed by government, are still a significant factor. These hospitals as a rule tend to land earlier in financial distress, requiring bailing

out. The trend to for-profit privatization in countries such as Germany, has been mainly to avoid bleeding of public funds to public hospitals in financial distress.

*Dutch hospitals
have on an
average posted a
good performance*

Dutch hospitals, perhaps because they have been private early on, have avoided severe financial distress. They are on an average well managed and self supporting. This is by no means a support of the view that Dutch hospitals have little improvement potential. On the contrary, we strongly support the view, and find regularly confirming evidence of it in our work, that Dutch hospitals have miles and miles of improvement potential. But it could have been much worse.

The crucial question is how to unleash the potential of Dutch hospitals. This is truly a billion Euro question. Healthcare value in the economy is bound to expand, no matter how you look. Whichever country cracks the healthcare riddle will have a much stronger economy, but also a great concept for rollout and international expansion.

*The current
reforms are well
meant ...*

The Dutch attempt to crack the healthcare riddle is light years ahead of many countries. We have private hospitals. We have deregulated the insurers market without sacrificing solidarity. And we are experimenting with greater freedom for hospitals to innovate. Both the room to innovate as well as the incentive to do so for hospitals is expanding. It could well be a great story to tell our grandchildren. How in those turbulent and uncertain years 2000-2010 the healthcare policy, insurer, and provider pioneers pushed ahead despite the non-believers.

*... but the pace is
too slow*

We would like to believe very much in this fairy tale. The trouble is the pushing ahead has come to a crawl. And worse, deregulation has not proceeded by just removing obstacles. In place of some hurdles removed, others have mushroomed, making it all the more difficult for hospitals. The case of for-profit hospitals is a good example. Financing is, for the ministries, the banks, the insurers, the hospitals, the doctors and the patients, the fundamental and most painful question. If profit shall goad hospitals and doctors to redesign their behavior and thereby their processes to provide better healthcare, everyone would benefit.

*Dutch hospitals
must push
forward*

Unfortunately despite the reforms the Dutch hospitals are still in a time wrap. It is important in the coming years that Dutch hospitals evolve from this boggling time wrap and boldly push forward. A clear and consistent reform agenda pushed through diligently and rapidly is essential. But Dutch hospitals also need to show dramatically

different behavior and performance. The performance in 2006 does not bode well. Some of the ingredients are in place for superior performance but many more need yet to be put in place.

R1.

	Outperformers 2006	On-par performers 2006	Underperformers 2006
Small, rural	Antonius Beatrixziekenhuis Bethesda De Tjongerschans Flevoziekenhuis Franciscus Nij Smellinghe Refaja St. Jansdal t Lange Land Van Weel-Bethesda Ziekenhuis Zeeuws-Vlaanderen	Delfzicht Elkerliek Gemini Laurentius Koningin Beatrix Ruwaard van Putten St. Jans Gasthuis Talma Sionsberg Zorggroep Utrecht West Slingeland	IJsselmeer Lievensberg Noorderboog Oosterscheldeziekenhuizen Pantein Rivierenland Rode Kruis Saxenburgh groep Scheper St. Lucas Waterlandziekenhuis Wilhelmina Ziekenhuis Walcheren
Small, urban	Amstelland Ikazia	Bronovo-Nebo Mesos MC St. Anna	BovenIJ Diaconessenhuis Leiden Ijsselland
Large, rural	De Gelderse Vallei Groene Hart Meander MC Orbis Tergooiziekenhuizen Westfries Gasthuis	Bernhoven Gelre VieCuri Spaarne	Albert Schweitzer Amphia Kennemerland TweeSteden Ziekenhuis de Heel Ziekenhuisgroep Twente
Large, urban	Diakonessenhuis Utrecht/Zeist/Doorn Rijnland St. Franciscus Gasthuis Rotterdam	Medisch Centrum Rijnmond-Zuid Vlietland	Slotervaart
STZ	Canisius-Wilhelmina Deventer Ziekenhuisgroep MC Alkmaar MC Haaglanden St. Elisabeth	Catharina Haga Jeroen Bosch Medisch Spectrum Twente Reinier de Graaf St. Antonius St. Lucas Andreas	Alysis Atrium MC Isala Martini Maxima MC Noorderbreedte Onze Lieve Vrouwe Gasthuis
UMC	AZ Maastricht UMC Utrecht	Academisch Medisch Centrum Erasmus MC UMC Groningen VU Medisch Centrum	Leids Universitair MC UMC St. Radboud

Ranking

Ranking hospitals is anything but simple and definitely when quality of healthcare is included. What are we exactly comparing? The specialists? The cleanliness? The food? The mortality rate? The waiting periods? The profitability? The market churn? The size in B segment? There are so many different facets of performance. And the performance within each facet may diverge further, depending on the department one looks at. The task of achieving an overall rank appears stupendous and foolhardy. Yet such rankings proliferate. And with proliferation of difficult tasks, such as ranking hospitals, comes confusion.

We do not wish to contribute to this confusion. It is important to emphasize our ranking does not include any medical and service quality parameters. It is purely based on business performance measures. We believe that these measures reflect the market performance, the cost structure and the financial health of hospitals.

Compared to last years we have further simplified our ranking in order to make it more simple and transparent.

We have used the following metrics to develop the ranks:

- 1) Market performance
 - a. Overall market score
 - b. Gain in market score
 - c. B segment market score
- 2) Operational performance
 - a. Cost-to-serve (EUR to serve one patient entity)
 - b. Patient entities/EPB
- 3) Financial performance
 - a. Profit/Turnovers (Net Results)
 - b. Own equity/Total balance

These business metrics are based on reliable sources like audited annual reports.

R2.

	Churn 2005-2006	Cost-to-serve improvement 2005-2006	Financial result improvement 2005-2006
Small, rural	Nij Smellinghe	Oosterschelde	Pantein
Small, urban	Diaconessenhuis Leiden	Mesos MC	BovenIJ
Large, rural	Groene Hart	Groene Hart	Spaarne
Large, urban	St. Franciscus Gasthuis	Medisch Centrum Rijnmond-Zuid	Medisch Centrum Rijnmond-Zuid
STZ	MC Haaglanden	St. Lucas Andreas Ziekenhuis	St. Lucas Andreas Ziekenhuis
UMC	AMC	AZ Maastricht	Erasmus MC

We rank the hospitals within their six peers groups (Exhibit R1). We see no sensible way to compare a large urban hospital with complex case mix with a small rural hospital. By limiting the comparison to within the peer groups we hope that the ranks will be more relevant to the hospitals. Comparing a 100m runner to a marathon runner is also unlikely to coax the marathon runner to post the fastest time. To coax hospitals to better performance they must be able to recognize and accept the performance of their peers.

In addition to absolute rank, improvement year on year is also important. Hospitals are slow moving, gigantic tankers. Absolute ranking does not capture the dynamism within the hospital. The improvement of MCRZ on both operational and financial performance is a good example. On both metrics MCRZ posted the best improvement in 2006. It has still not brought MCRZ to the top of its peer group, but it has moved immensely given its legacy (Exhibit R2).

We painfully realize the limitation of the rankings. The risk of distortion in the media is ever present and even dangerous. Strategy consulting as a profession normally does not make for interesting party talk. But hospitals as a profession do attract small talk at parties. We are tongue tied when somebody comes up to us to share the news that the "best hospital" according to us was really good or really bad. We don't believe in best hospitals. And we have definitely no clue when it comes to medical quality.

The Odyssey

Odysseus' arduous and long journey home proved so difficult that a new word – Odyssey came into use to describe similar enduring developments. The Shorter Oxford Dictionary defines Odyssey as *an extended process of development or change*.

The Dutch hospitals are certainly engaged in such a change or development. The reasons for change are not obvious to all. But we believe that given the relentless growth of healthcare, it must be gradually shifted from centralistic public funding to individual private funding. And only when the health seeker, the private individual understands the financing need, will she actively seek and forge the suitable healthcare landscape.

It is likely to be an arduous journey with many triumphs and tribulations. The current healthcare landscape took nearly half a century to appear. It will not change at the whim of a few new rules in a couple of years. It will, like Odysseus, take nearly a lifetime to seek its course.

The important new developments in 2006 were:

- 1) B segment grew by 40%
- 2) Profitability of hospitals tumbled as costs grew much faster than turnover and production

In 2006 a number of earlier trends set forth:

- 3) The market net churn of hospitals was 2%. Over longer periods and in competitive regions, churns are much higher.
- 4) Despite marginally improved labor productivity, huge procurement cost increases washed out any overall benefit

None of these changes sound dramatic enough to inspire Homer. But Homer was of course writing either in hindsight or was inspired. We have the clerical task of reporting year on year. Looking at one year at the time, the story of the journey may seem mundane. But the challenges facing healthcare are anything but mundane. And we shall continue to compile them year on year. Over many years we hope they will reflect a triumphal Odysseus returning to his beloved Ithaca.

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