FINANCIAL PERFORMANCE ANALYSIS OF NEPALESE MEDICAL COLLEGE AND HOSPITAL

(A comparative study on Nepal Medical College Teaching Hospital and Kathmandu Medical College Teaching Hospital)

A THESIS

Submitted by

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VIVA – VOCE SHEET

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RECOMMENDATION

This is to certify that the thesis

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has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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DECLARATION

I hereby declare that this thesis entitled ***"Financial Performance Analysis Of NMCTH & KMCTH"*** Submitted to Research Department of Nepal Commerce Campus, Faculty of Management, Tribhuvan University, is my original work as partial fulfillment of the requirement of the degree of Master in Business Studies (M.B.S.), this is prepared under the supervision of **Dr. Sushil Bhakta Mathema** Associate Professor, Nepal Commerce Campus, New Baneshwor.

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ABBREVIATIONS

C.V	=	Co-efficient of variance.
CPS	=	Cash Flow per Share.
EPS	=	Earning Per Share.
IOM	=	Institute of Medicine.
KMCTH	=	Kathmandu Medical College Teaching Hospital.
KU	=	Kathmandu University.
MCOMS	=	Manipal College of Medical Sciences.
NMA	=	Nepal Medical Association.
NMA	=	Nepal Medical Association.
NMC	=	Nepal Medical Council.
NMCJ	=	Nepal Medical College Journal
NMCTH	=	Nepal Medical College Teaching Hospital.
P/L	=	Profit and loss Account.
S.D	=	Standard Deviations
VOTICS	=	Visual Operation Theatre Information and Communication System

CHAPTER I
INTRODUCTION

1.1 Background of the Study

It may seem unnecessary to define a "hospital" since everyone knows the nature of a hospital. A hospital began as a charitable institution for the needy, aged, infant, or young.

The word "hospital" comes from the Latin "hospes" which refers to either a visitor or the host who receives the visitor. From "hospes" came the Latin "hospitalia", an apartment for strangers or guests, and the Medieval Latin "hospitale" and the old French "hospital." It crossed the channel in the 14th century and in England began a shift in the 15th century to mean a home for the elderly or infirm or a home for the down and out.

It only took on its modern meaning as "an institution where sick or injured are given medical or surgical care" in the 16th century. Other terms related to hospital include hospice, hospitality, hospitable, host, hostel and hotel. The Hôtel-Dieu, a name often given to a hospital in France during the Middle Ages, is the hotel of God.

Nepal is teeming with evidence of citizens, for over 60 years now, taking the initiative to start educational institutions without much state involvement. In fact, ever since the political change took place in Nepal in 1951 brought about by democracy, a large number of schools and colleges were established either by an individual or the community. Most of these initiatives were motivated purely by a sense of social service. Such educational institutions were low-cost and affordable. When the National Education system Plan was implemented in 1972, most of the educational institutions established by private groups were taken over by the government and all the teachers and staff working there became government employees. In the1980s there was a move to establish English medium schools in the private sector. This was partially motivated by the need to provide quality education at a slightly higher cost than the government schools and colleges. Apparently, the rise in the number of people who could afford to pay higher fees for better educational facilities was also

partly responsible for this development. Though there was an unsuccessful attempt to start a private medical college around 1986 with affiliation to a religious group in India, technical education was outside the realm of this development till 1990. The situation changed rapidly with the political changes of 1990. Now there are more medical colleges, technical health training institutions and schools in the private sector than in the government sector. These institutions were started to meet the needs of the country as well as to cater to the growing number of students wanting to pursue training in the technical field. Since private sector funds run these institutions, cost recovery and profit from investment are important considerations. And when there is more than one player wooing the students, there is bound to be a keen sense of competition and a need to advertise etc. In other words, such institutions have to function as viable commercial enterprises rather than as institutions with a purely social mission.

Nepal is developing country .Due to the poverty, illiteracy and lack of consciousness, majority of people suffer from different kinds of diseases .Hospitals are not available quantitatively and qualitatively for these patience. Most of the hospitals are town oriented. The doctors of rural areas also stay in town for their own facilities .Hence, in general, people can't get proper medical treatment and concerned department hadn't given the proper attention in it. Now the effective service of the hospital doesn't depend on only the qualification and ability of the doctors and technicians but the financial and investment activities of the hospital. Not only the private hospital but also it should give the attention towards the return. The hospital can only get the targeted profit if it can make effective financial investment. The administration should have serious exercise towards the financial activities. Financial performance analysis is an important base of that exercise.

From the financial performance of a particular hospital, the financial position and comparative position with the competitors can be found out. Hence, the financial analysis deserves an inevitable role in order to diagnose its limitation and weakness and in turn, to decide the reformative measures the days to come.

As there is the equal usefulness of the performance analysis for administration shareholders, further investors researchers and other competitive hospitals, all of them can take an advantage of the financial performance analysis carried out by themselves or others. From this analysis the hospital administration obtain the blue print for further decision making. The investors take help of financial performance analysis in order to be sure of the return on investment. The possible investors and the comparative hospital take help of financial performance analysis to develop the financial capacity of own hospital then the competitive hospital.

1.1.1 Historical Development of Nepalese Hospital

The history of Nepalese hospital in Nepal is not very old. Actually according to survey Bir Hospital is the first hospital in Nepal. The following hospital will grow up Day by Day.In Nepal, more and more hospital are established. Some of the hospital and Nepalese colleges are described as follows.

Nepal Medical College Teaching Hospital.

Nepal Medical College & Nepal Medical College Teaching Hospital (NMCTH) forms two sides of the same health institution, established primarily for imparting Medical including Health Sciences Education for the Daughters & Sons of Nepal in particular and the Daughters & Sons of the Global Community in general. At the same time the NMCTH provides health care services from its Tertiary Care Hospital as well as Community Satellite Health Centre and undertakes scientific. It was started in 1996

Vision, Mission and Goal of NMCTH

Vision

Sole Nepalese undertaking, self reliant health institute, self reliant health institute Provide health care services to the people from its tertiary care which shall impart medical education including other health sciences education of undergraduate, graduate and postgraduate levels to the daughters and sons of the “global community” in general and to the daughters and sons of Nepal in particular. which should ultimately be upgraded into a deemed Technical University of Medical and Health Sciences of international repute

Mission

The mission set by Nepal Medical College Teaching Hospital is to educate human resources for health who are competent and having caring and compassionate behavior for rendering preventive, primitive, curative and rehabitative healthcare services to the people and at the same time keep themselves updated with the latest trends in medical and health sciences education by self–enquiring minds of biomedical, sociocultural and epidemiological scientific research.

Goal

The goal of Nepal Medical College Teaching Hospital is to earn itself the name of international fame by imparting quality education to the learners of medical and health sciences education , develop competent human resources for health who shall provide quality healthcare services to the people of Nepal in particular and the people of the global community in general.

Objectives

The objectives of Nepal Medical College are:

Conduct undergraduate, graduate and postgraduate levels of medical education, provide quality tertiary, provide general health services continuing health services and research and improve health status health profile of the district where it is established and the country as a whole.

Kathmandu Medical College Teaching Hospital

Kathmandu Medical College (KMC) is a coordinated approach of like minded people to provide quality education in Nepal within a modern academic environment and to provide job opportunities in medical fields for deserving young professionals. Established in December 1997, Kathmandu Medical College is recognized by the Nepal Medical Council and Sri Lanka Medical Council. It is affiliated with Kathmandu University. Combined efforts of dedicated members of a highly qualified and talented team have enabled the college to move ahead in its efforts to produce well-trained medical professions.

There is a community at Duwakot. It will initially be of 50 beds but will be increased later to 100 beds. This institution will cater to long term patients eg. orthopedics, rehabilitative and geriatric. The present bed strength of KMC Teaching Hospital at Sinamangal is 515 Nos.

Vision, Mission and Goal of KMCTH

Vision

Kathmandu Medical College is attracting students from all over the world to its constantly innovative educational programme to produce high class qualifies , socially accountable health workforce in south Asia region. To attain this there will be Cooperation and Team Spirit, Untiring effort for improvement, Courtesy and Humility, Adaptability and gratitude.

Mission

The primary objective of KMCTH is to provide quality medical education within a modern academic environment to produce qualified medical professionals who can contribute to the larger society by means of community based as well as problem and need based.

Goal

Collaborate and coordinate with medical schools of other universities for the growth and development of academic programmes, research undertakings and health care services. Two main goals are performed to Promote and to conduct research for the growth of new scientific knowledge and to participate and provide health care to people.

Objectives

With the aim of quality medical education within modern academic environment, Kathmandu Medical College committed to provide its students a community oriented medical education and to create a socially accountable health work force in a nation, committed to proved quality health care to entire human society.

Bir Hospital

Bir Hospital is the oldest government hospital in Nepal that has been providing service to the poor people from across the country since its establishment. It has also been providing post-graduate training to medical, surgical and other specialists for a long time. Bir hospital was established at 1962.

Institute of Medicine

Tribhuwan university institute of medicine was established in 1972 under Tribhuwan University and had the mandate and the responsibility of training all categories of health manpower needed in the country.

The teaching hospital was established in 1983 with the primary objective of providing practical field for postgraduate and certificate level of training programme conducted by TU Institute of Medicine which also assists the Institute of Medicine in producing and fulfilling the manpower needs of the kingdom. It has 401 bed hospitals.

Nepal Eye Hospital

Nepal Eye Hospital was established on 1982 with the objective to provide the better services to over come the problems of eye diseases.

B.P Koirala Institute of Medicine

B.P. Koirala Institute of Health Sciences was established by an act of parliament in the year 1993 as an autonomous institute. As per its stated mission, it is recognized as socially accountable medical school and also as centre for research & innovation in service as well as education. There is a gap in the cost of service & affordability by people. This Program is based on Social Solidarity. Contribution on ability to pay, Non profit concept and compulsory for house holds are the main theme of B.P. Koirala Institute of Medicine.

Manipal Medical College Teaching Hospital

Manipal College of Medical Sciences (MCOMS) is affiliated to Kathmandu University, a national university established by an act of Parliament. The university is situated at Dhulikhel, a scenic location on the outskirts of Kathmandu. Established in 1994 B.S, the Manipal College of Medical Sciences, Pokhara is affiliated to Kathmandu University.

Nepalgunj Medical College

Nepalgunj Medical College was established under the law of Nepal, in private sector, in 1996 and the first Batch of students was admitted in December 1997. The College is affiliated to Kathmandu University and approved and recognized by the Nepal Medical council and the Government of Nepal. The first Batch has graduated (in July 2002) and the internship has been completed in the first week of September 2005.The present annual intake of this College is 100 students per annum.

Kathmandu University (College of Medical Sciences)

Kathmandu University is an autonomous, not-for-profit, non-government, public institution dedicated to maintain high standards of academic excellence. The University is committed to develop leaders in professional areas through quality education. At present, the University offers various intermediate, undergraduate, graduate and postgraduate level programs in science, engineering, medicine, management, education, pharmacy, environment, music, human & natural resources, information technology and biotechnology through its six different schools, School of Science, School of Management, School of Engineering, School of Medical Sciences, School of Arts and School of Education. In addition to 2500 students in its constituent schools, 2900 students are studying in its affiliated colleges. Annual intake capacity of KU is 880, of them 350 intermediate, 330 undergraduate, and 200 graduate level studies. KU affiliated colleges have annual intake capacity of 972.

Nobel Medical College Teaching Hospital

Nobel Medical is a private, academic institution dedicated to providing medical education at the undergraduate level and also patient care and research services

through its teaching hospital and research centre. It is established to deliver qualitative yet affordable healthcare services through produce professionals, and to pioneer the medical frontiers through innovative researchers.

National Medical College

Affiliated with internationally renowned Tribhuwan University, Kathmandu, Nepal, the degree of which is recognized by the Medical Council of Nepal, India, Pakistan, Bangladesh, Sri Lanka and General Medical Council of Great Britain. The college is also recognized by the Medical Council of Nepal and is approved by the Ministry of Education and Sports, HMG/Nepal

1.2 Focus of the Study

The study mainly focuses on the financial area of the two medical colleges KMCTH and NMCTH. Financial area represents the collection and investment of funds of which the core focus area is financial performance analysis of the colleges. As, we know that medical college is not a financial institution. It is established for providing service but financial plays an important role in both financial as well as service organizations. The motto of a medical college is earning money from servicing people. To obtain the targeted return an organization most analyze its financial performance.

1.3 Objectives of the Study

The study entirely related to the financial performance analysis of KMC and NMC from which the researcher is interested to know

- To analyze the trend of financial performance of Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital
- To find out the strength and weakness of Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital.
- To explore the financial positions between Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital.
- To provide suggestion for Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital.

1.4 Statement of the Problem

Need of the study is to evaluate the financial performance of the two Medical College and to suggest measures for its improvement, therefore identification of the causes and problem responsible for the analysis on financial performance between KMC and NMC and the study is simply a partial fulfillment of MBS programmed so the Study will be limited as follows:

- What is the present performance of Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital
- What is the future of Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital
- Is the Overall profitability of the Companies are Satisfactory.
- What type of Capitalization policy do the company apply?
- What is the portfolio of investment in each profitable field?

1.5 Significance of the Study

Study of the financial performance analysis is important for different persons and institutions of concerned area. It helps not only to identify the financial performance of NMC and KMC but also recommend a workable suggestion for these hospitals on the collection and applications of the fund.

The major significance of the studies is as follows:

- To identify the financial area of medical Hospitals.
- To know the financial performance of Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital
- This study helps to provide workable suggestion for Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital
- For the Partial Fulfillment of MBS

1.6 Limitations of the Study

The study is based on secondary data covers only the financial performance analysis of financial area. It is a limited exercise which contains the comparative financial

performance of KMCTH and NMCTH is necessary .The following question will be prepared for this study.

- The study covers only Five Years from FY 2005/06 to FY 2009/2010
- This research is completely based on the secondary data and ther e will not be any judgment to check the reliability of published data.
- The study doesn't cover all rations of financial performance analysis .Only relevance ratios will be taken under the study.
- The study doesn't consider the monetary value of quality medical services.
- This study gives emphasis mainly on the financial performance of KMC and NMC.

In overall, the main problem of research is concentrated in the comparative weakness and inefficiency regarding basically to their liquidity, earning capital structure, capital adequacy and growth of KMCTH and NMCTH.

1.7 Organizations of the Study

This study is organized and decorated in five chapters. Each chapters and units has been prescribed format of thesis Writing. Each unit gives the clear picture or roadmap of the study

- "Introduction of the study "under which background, objective, limitation and significant are covered.
- "Review of Literature "which deals review of the different literature of study field and generally it is taken from different books, Journals, articles and previous thesis.
- "Research Methodology" includes research design, population and sample, source and technique of data collection, data analysis tools etc.
- "Data presentation and Analysis "deals with presentation and analysis of relevant data and information through a definite course of research methodology.
- "Summary, Conclusion and Recommendation". This chapter deals summary of the study held, conclusion made through study and possible suggestion to management".

CHAPTER-II
REVIEW OF LITERATURE

Review of literature is an essential part of study. It is a way to discover what other research in the area our problem how uncovered. It is a way to avoid investigating problems that have already been answered. Review of Literature has been presented in a form of conceptual framework and related studies also have been reviewed under this chapter.

2.1 Conceptual Framework

2.1.1 Concept of Hospital and Origin of Primary Health Care

Hospital is a place where people get services. A wealth of knowledge and experience in enhancing the quality of health care has accumulated globally over many decades. In spite of this wealth of experience, the problem frequently faced by policy-makers at country level in both high- and low and middle – income countries is to know which quality strategies complemented by and integrated with existent strategic initiatives-would have the greatest impact on the outcomes delivered by their health systems.

In every country there is an opportunity to improve the quality and performance of the health-care system, as well as growing awareness and public pressure to do so. The challenge of health systems is to ensure that engagement with patients and the population is at the heart of all policies and strategies for quality improvement, and that this commitment is translated into meaningful action.

The Sinhalese (Sri Lankans) are perhaps responsible for introducing the concept of dedicated hospitals to the world. According to the Mahavamsa, the ancient chronicle of Sinhalese royalty written in the 6th century A.D., King Pandukabhaya (4th century BC) had lying-in-homes and hospitals (Sivikasotthi-Sala) built in various parts of the country Roderick E. McGrew, Encyclopedia of Medical History (Macmillan 1985, p134-5).

This is the earliest documentary evidence we have of institutions specifically dedicated to the care of the sick anywhere in the world. Mihintale Hospital is perhaps the oldest in the world.

Institutions created specifically to care for the ill also appeared early in India. King Ashoka founded 18 hospitals 230 BC. There were physicians and nursing staff, and the expense was borne by the royal treasury. State-supported hospitals later appeared in China during the first millennium A.D. (Ashoka Hospital, 230 BC)

The first teaching hospital, however, where students were authorized to methodically practice on patients under the supervision of physicians as part of their education, was the Academy of Gundishapur in the Persian Empire. One expert has argued that "to a very large extent, the credit for the whole hospital system must be given to Persia" (Academy of Gunishapur).

2.1.2 Early hospitals in Asia

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be given to Persia". Roderick E. McGrew, Encyclopedia of Medical History(Macmillan, 1985, p.139).

2.1.3 Objectives of Hospital

Six Strategic Goals and three special projects have been identified the achievement of the strategic goals will be measured by the accomplishment of the plan's objectives delineated following the description of each goal.

"Health care financing"

- Centrally administrated financing: yearly allocations for health were part of the annual bargaining over the stated budget.
- During the 1960's and 1970's low priority was given to non-productive sectors- Including health.
- No expansionary period (as in many western countries) when health expenditure grew 40 to 60 percent faster than Gross Domestic Product.
- Health expenditure never exceed 4.5% of GDP until the late 1980's.Expanding physical and human resource capacities came the expense of low salaries , logging technology and decaying infrastructure. World Bank(1998:224)

"Medical teaching is incomparable with teaching in other faculties because it deals with human life. Medical (Clinical) teaching is also different from other teaching because it directly involves the individual human beings inciting his/her medical history, and in the various stages of investigations, treatment and follow up. It is guided by population, disease pattern, morbidity and mortality .Medical teaching is also prerequisite for students and their respective backgrounds and availability of resources at the school or teaching hospital. The effects of communications technology (specially the internet) education and socio economic status. of people, tradition and social beliefs are also equally important (Journal of Institute of Medicine, 2005, p24).

"The performance of the firm can be expressed by computing key ratios and analyzing (a) How is the firm performing relative to the industry? (b) How is the firm

performing relative to the leading firms in their industry? (c) How does the current year performance compare to the previous year(s)? (d) What are the variables driving the key ratios? (e) What are the linkages among the ratios? If it is hard to analyze a ratio in isolation (f) what do the ratios reveal about the future prospects of the firm for various stakeholders such shareholders, employees of the firm for various stakeholders a series of graph and figures will be fulfill exercise? We need to put the information in a proper context by clearly identifying the purpose of our analysis and identifying key data driven our analysis" (Bhandaric, 2004, p263).

Health Care Planning in Developing Countries

A lack of sufficient resources to provide a vast majority of the population with essential health services has been witnessed, particularly in many developing countries. Therefore, health planning has become increasingly important and imperative in an attempt to enable limited resources to be used more efficiently and effectively. Eight years ago Andrew Green published the first edition of this book, trying to offer a textbook on health planning in developing countries to those who are interested to learn how to plan the health sector. Since the publication there have been many changes in the international context which have implications for health planning. The new edition of the book tried to reflect and address some of the major changes, such as Health Sector Reform (HSR) as the policy agenda over the past decade.(Andrew Green, Oxford Medical Publications, Oxford University Press, 1999).

2.1.4 Process for Improving Quality Health Care System

Everyone needs to be well informed and concerned about the quality of care. Everyone means patients and their families, consumer agents and advocates, health professionals, administrators of health plans and facilities, purchasers of health care services, and policymakers at all levels. The messages to these audiences are

1) That the quality of care can be measured and improved and

2) That quality of care should not be ignored in pursuit of cost control.

Reinforcing these messages means making sure that quality of care stays on the health care-delivery agenda, with clear identification of the risks and opportunities that are posed by the changes in health care in the United States. It also means describing how health plans, health care organizations, and clinicians should be accountable to patients and society and, conversely, how individuals can take appropriate responsibility for their own health

2.1.5 Six Statistical Highlights in Global Public Health

The following are the six statistical highlights in Global Public Health.

I Child Mortality (The gap within countries is not closing)

While some countries are making progress and achieve greater in child survival chances within the country, the general picture is that little progress has been made during the last decade.

Comparison of child mortality ratios by residence, mother's level of education and wealth quantities with DHS surveys conducted in the same countries earlier shows that there is little progress towards reducing the gaps within countries.

II Risk Factor Transition

The risk factor transition refers to a change from a high prevalence of risk factors for communicable diseases (such as underweight, poor water and sanitation) to a high prevalence of risk factors for chronic disease (such as tobacco use, high blood pressure and obesity).

According to current estimates, the annual number of tobacco related deaths worldwide is projected to rise from 4.9 million in 2000 to more than 10 million by 2020, unless effective interventions take hold. The increase will be greatest in developing countries. Students aged 13-15 years were surveyed about their use of tobacco in more than 140 countries during the period 1999-2005.The results for boys and girls suggest that current pattern

III Infant Immunization Coverage: Where are We Now?

Efforts to increase global immunization need to focus on countries where most of the world's unvaccinated children driven live. WHO and UNICEF estimate that in 2004, 78% of children under one year of age received three doses of diphtheria, tetanus toxoid and pertussis vaccine (DPT3), while 102 or 53% of all countries achieved coverage of more than 90%, 50 countries still have coverage levels below 80% and 10 have coverage less than 50%.

There are five large-population countries (India, Nigera, Pakistan, China and Indonesia) each of with more than one million unvaccinated children, accounting for 16.3 million (more than 60%) of the world's estimated 27 million unvaccinated children. Nigeria's coverage is less than 50%, other countries have higher coverage rates India, 64%, Pakistan 65%, Indonesia, 70% and China , 91%(Source: Who/UNICEF,2006).

IV Health Workforce, Health Expenditure and Disease Burden: Higher Burden, Fewer Resources

The World health report 2006 identified major inequalities in the distribution of health workers among countries. Countries with the lowest relative need have the highest numbers of health workers, while those with the greatest burden of disease must make do with a much smaller health workforce.

The region of the America's, which includes Canada and the united States , contains 10%of the global burden of disease, yet almost 37% of the world's health workers live there and more than 50% of the world's financial resources for health are spent there. Europe has a similar disproportionate share of the world's financial resources for health.

In contrast, the African Region suffers more than 24% of the global burden of disease but has access to only 3% of health workers and less than 1% of the world's financial resources, even when loans and grants from aboard are included. The eastern Mediterranean Region, which has 9% of the disease burden, has only 3.5% of the health workers and 1% of the world's financial resources. South-East –Asia has the largest share of the world's burden (29%), but only 12% of the health workforce and

just over 1% of the financial resources. The western resources for health, although there are major differences between countries in the region.

V Health Forecast: Projecting Causes of Death to 2030

The world will experience a dramatic shift in the distribution of deaths from younger to older ages and from communicable diseases to noncommunicable diseases during the next 25 years. In 2005, 19% of all deaths were among children, 29% were among adults aged 15-59 years and 53% were among people aged 60 years and older. By 2030, the respective proportions will have changed to 9%, 29% and 62%.

The proportion of all deaths due to communicable, maternal, perinatal and nutritional causes is expected to decrease from 30% in 2005 to 22% in 2030, while the share noncommunicable disease is likely to increase from 61% to 68%.Injuries are estimated to account for 9% in 2005 and in 2030.These are the results of WHO's updated mortality projections, based on projections of economic and social development, and using the historically-observed relationships of these with cause specific mortality rates, including separate projections for HIV/AIDS, tuberculosis, lung Cancer and diabetes.

IV Government Spending on Health Care

The proportion of government budge allocations to health varies from less than 5% in several countries in Africa, Asia and the WHO Eastern Mediterranean Region, to well Over 20% in some countries in the Americas. One third of low income countries allocated over 10% of their national budget to health in 2003.This relatively high share of the budget reflects large influxes of external resources earmarked for health through global health partnerships such as Global Fund to fight AIDS. In 200, 53 African heads of the state pledged to allocate 15% of their national budget to health.

2.1.6 New Technology In Healthcare System

Telemedicine

Telemedicine the use of telecommunications and computer technology to provide medical information and services at a distance--is growing in popularity. Because of the rapid advances being made in the technology, more and more clinical applications

can now be performed via telemedicine. However, the decision to adopt telemedicine should be made only if a clinical need for this technology can be demonstrated. And successful implementation and operation depend on specifically designing the technical infrastructure--that is, the computer hardware and software and the telecommunications system--to meet this clinical need. But even more important is making sure that everyone involved in such a program, including clinicians, telecommunications suppliers, and patients, understands the objectives, benefits, and particular requirements of telemedicine. In this Guidance Article, we provide an overview of the issues surrounding telemedicine. We present examples of successful telemedicine programs, along with guidance for facilities considering programs of their own. We also outline the barriers to successful implementation. And we discuss how, once a telemedicine program is in place, facilities can evaluate the effect of the program on their delivery of healthcare. In supplementary articles, we discuss the technology used for telemedicine and provide a list of telemedicine resources for readers who wish to learn more about the subject.

Types of Technology in Telemedicine

Two different kinds of technology make up most of the telemedicine applications in use today. The first, called store and forward, is used for transferring digital images from one location to another. A digital image is taken using a digital camera, ('stored') and then sent ('forwarded') by computer to another location. This is typically used for non-emergent situations, when a diagnosis or consultation may be made in the next 24 - 48 hours and sent back.

The image may be transferred within a building, between two buildings in the same city, or from one location to another anywhere in the world. Teleradiology, the sending of x-rays, CT scans, or MRIs (store-and-forward images) is the most common application of telemedicine in use today. There are hundreds of medical centers, clinics, and individual physicians who use some form of teleradiology. Many radiologists are installing appropriate computer technology in their homes, so they can have images sent directly to them for diagnosis, instead of making an off-hours trip to a hospital or clinic.

Telepathology

Telepathlogy is another common use of this technology. Images of pathology slides may be sent from one location to another for diagnostic consultation. Dermatology is also a natural for store and forward technology (although practitioners are increasingly using interactive technology for dermatological exams).Digital images may be taken of skin conditions, and sent to a dermatologist for diagnosis.

The other widely used technology, two-way interactive television (IATV), is used when a 'face-to-face' consultation is necessary. The patient and sometimes their provider, or more commonly a nurse practitioner or telemedicine coordinator (or any combination of the three), are at the originating site. The specialist is at the referral site, most often at an urban medical center. Videoconferencing equipment at both locations allows a 'real-time' consultation to take place. The technology has decreased in price and complexity over the past five years, and many programs now use desktop videoconferencing systems. There are many configurations of an interactive consultation, but most typically it is from an urban-to-rural location. It means that the patient does not have to travel to an urban area to see a specialist, and in many cases, provides access to specialty care when none has been available previously. Almost all specialties of medicine have been found to be conducive to this kind of consultation, including psychiatry, internal medicine, rehabilitation, cardiology, pediatrics, obstetrics and gynecology and neurology. There are also many peripheral devices which can be attached to computers which can aid in an interactive examination. For instance, an otoscope allows a physician to 'see' inside a patient's ear; a stethoscope allows the consulting physician to hear the patient's heartbeat.

Many health care professionals involved in telemedicine are becoming increasingly creative with available technology. For instance, it's not unusual to use store-and-forward, interactive, audio, and video still images in a variety of combinations and applications. Use of the Web to transfer clinical information and data is also becoming more prevalent. Wireless technology is being used for instance, in ambulances providing mobile telemedicine services.

Votics (Visual Operation Theatre Information and Communication System)

Votics is our new multimedia communication and documentation solution. Votics changes workflows in the operating room, operates quality control, relief's the physician of administrative tasks and creates new possibilities for basic and advanced training. With VOTICS surgical procedures can be monitored live and in real time over digital networks, and information can be exchanged independent of the location.

Votics provides a solution that revolutionizes documentation and communication processes in endoscope and other imaging techniques in the operating room. Easy, quick and inexpensive to install, this system creates tremendous saving potentials through effective and intelligent data management and information exchange between departments as well as hospitals - advantages from, which commercial enterprises have long profited.

2.1.7 Medical Ethics in Nepalese Context

The history of medical practice in Nepal is relatively short, prior to 1951; Nepal was under an autocratic regime, which kept a strict control over the control of medical education and health facilities into the country. The development of health facilities depended on the wishes of the ruling class, not on the identified needs of the people. There were very few health institutions and the number of qualified doctors was around 20 in 1951, which year marked the onset of democracy in Nepal. The association of medical doctors came into existence ahead of a medical council. In fact, it was the Nepal Medical Association which, in the twelfth year of its existence, first demanded the establishment of a medial council to regulate the medical practice. The Nepal Medical Association, during its first national conference in 1963, unanimously passed a resolution demanding the creation of Nepal Medical Council. Subsequently, the Nepal Medical Council Act was enacted in 1964.Though the Act passed in 1964; it took another two years before the provisions of the Act were implemented.

(NMC) The medical council act laid down some guidelines regulating the medical practice in Nepal. Prior to the enactment of the Act, medical practice was a matter of

law and order was regulated by the provisions of the National Civil Code (Muluki Ain).The earliest legislation in relation to medical practice can be traced to the publication of "IIAJ game Ko" (on treatment) in Muluki Ain (Law of the Land) in 1853.Since the establishment of the Nepal Medical Council in 1996, it has been made mandatory that the doctors wishing to work in Nepal should register themselves with the council and sigh oath to follow the code of ethics developed by it. By signing this oath, the registering doctors commit themselves to follow the code of Ethics developed by the Nepal Medical Council in 1992.

Nepal Medical Association (NMA) is the largest professional organization of doctors in Nepal. Out of around 2000 doctors registered with the Nepal Medical Council, more than three fourths are members of the NMC. The members of the Association elect an executive committee consisting of 15 members. The NMA constituted a subcommittee on "Medical Ethics and Human Rights) in 1993.The subcommittee has been entrusted with the task of identifying the ways to resolve the ethical dilemmas faced by the members of the Association. *(Adhikari, BJM:64*

2.2 Financial Performance Analysis

Financial analysis is the process to identify the strengths and weakness of the firm by properly establishes in relationships between the items of the balance sheet and P/L account. Similarly comparative analysis of financial performance is to know the financial position of a firm over the competitive firm or the industry of the same firm. Financial analysis may be practiced by management of the firm or by parties outside the firm like investors, professional researcher's, creditors and others but the nature of analysis may differ due to the purpose of the analyst. Financial Analysis is concerned with analyzing the financial statement of an enterprise and real picture of financial performance mainly depends upon the firm's past, present and anticipated future conditions. A financial analysis enables us to evaluate and depict the condition of a firm's financial position. The analysis of financial statement as a process of evaluating relationship between component parts of financial statement to obtain a better understanding of a firm's position and performance.

"To make rational decision in keeping with the objective of the firm, the financials manager most has analytical tools. The company outside suppliers of capital, creditors

and investors all undertake financial analysis. The firm's purpose is not only internal control but also better understanding of what capital suppliers seek in financial condition and performance from it. After all public company is in a fish bowl always subject to credit and investor analysis". *(Van Horn; 2002:249)*

2.2.1 Meaning of Financial Statements

"Financial statements provide overall systematic information of a business organization regarding financial affairs. In which balance sheet represents a snapshot of the firm's position on a given date and while income statement is based on a flow concept, showing what occurred between two points of time" *(Weston and Brigham; 1980:182).*

"Financial statements are the end product of accounting activity carried out during the accounting period. Financial statements normally include Balance sheet and profit and loss account *"(Sharana; 2001:223).*

2.2.2 Analysis of Financial Statements

"Analysis of financial statements is the purposeful and systematic presentation of information in the financial statements by developing relationship between one fact with other in order to measure the profitability, solvency, liquidity, operational efficiency and the growth potential of the business"(Sharma; 2001:235).

"The analysis of financial statements refers to treatment of the information contained in the financial statements in a way so as to afford a full diagnosis of profitability and financial position of the firm concerned". *(Narang; 1997: 19)*

Balance Sheet:

"A balance sheet is an accounting statement prepared from accounting balance at a given data. It shows the financial position of a business by detaining the sources of funds and utilization of these funds. A balances sheet shows the assets and liabilities groups, properly classified and arranged in a specific manner" *(Juneja, chawala and saxena; 1991: 257).*

Income Statement

"The second major statement for financial information is income statement. It is also known as P/L account. It may be defined as any systematic array of revenues, expenses and other deduction and net income of a business for a stated period. Further- more income statement is an abstract portrayal of the dynamic life of the business presenting a longitudinal picture of the gains and looses of the business. Future and miss for tunes". *(Kumar; 1994:15)*

"An income statement is classified record of the gain and loss to the business for a period of time. It is prepared from various balance of subsidiary nominal account given in a shape of trail balance". *(Sharma and vithal; 1998:34)*

Cash Flow Analysis

A cash flow statement concentrates on transactions that have a direct impact on cash. It deals the inflow and outflow of cash between two balance sheet dates. This is, it explains the changes in cash position between the two periods cash flow needs inflow and outflow during the accounting period. From the beginning of the year up to the end of the year cash is received from various sources and spend on various heads. Incoming and out going of cash is termed as cash flow. The term cash here stands for cash and bank balance. *(Pilly and Vagawati; 2001:1437)*

In sheet , when analyzing cash, look at how much cash was generated from operating activities, from cash generated, how much was used in investment activities(Usually capital expenditure) and how much was used in investment activities (usually capital expenditure) and how much was needed in additional debt or used to pay down debt. It will give new overview angle on financial statements.

2.2.3 Ratio Analysis

The terms ratio refers to the numerical or quantitative relationship between two item variables. This relationship can be expressed as (i) Percentages say, net profits are 25% of sales (assuming net profit of Rs 25,000 and sales of Rs 100,000 (ii) proportion of numbers (the relationship between net profit and sales is 1:4" *(Khan and Jain; 1993:60)*

The ratio involves measuring the degree of the relationship between two variables or figures. In our case we shall be looking at the figures provides in the financial statements, or more specifically the balance sheet and profit and loss account. This relationship can be expressed in term of percentage, fraction or proportion of the number and compared against the performance of competing firms or against their own post performance. A carefully undertaken financial analysis can significantly help an organization in assessing its strength and weakness.

Altman (1968) used multiple discriminate analysis technique to assess the quality of ratio analysis. Only five out of 20 two ratios were finally considered as predictors. These five ratios were working capital to total assets, retained earning to total assets, earning before interest and tax to total assets, Market value of equity to book value of total debt and sales to total assets". *(Pradhan;2006:25)*

Types of Financial Ratios

A popular way to analyze the financial statements is by computing ratios. A ratio is a relationship between two numbers. A ratio by itself may have no meaning. Hence a given ratio is compared to a) ratios from previous years- internal funds. Ratios are more other firms in the same industry- external funds. Ratios are more of a diagnostic tool that helps us to identify problem areas and opportunities within a company. The most frequently used ratios as financial analysis are as follows:

"Liquidity Ratios measures the firm's ability to meet current obligations. It measures the short run solvency of the firm." The liquidity ratio measure the ability of a firm to meet its obligation and reflect the short term financial strength/ solvency of a firm are Net Working Capital, Current Ratio and acid test ratio"(Khan and Jain 1993,p118,19).

A firm should ensure that it doesn't suffer from lack of liquidity and also that it doesn't have excess liquidity. The failure of a company to meet its obligation due to lack of sufficient liquidity will result in a poor credit worthiness, Loss of creditors confidence or even in angles resulting in the closure of the company. The firm's funds will be unnecessarily tied up in current assets. Therefore, it is necessary to strike a report balance between high liquidity and lack of liquidity, the most common ratios which indicate the extent of liquidity are:

i) Current Ratio.

ii) Acid test (quick) ratio.

Leverage Ratio

"Leverage ratios may be calculated from the balance sheet items to determine the proportion of debt in total financing. Many variations of these ratios exist; but these ratios indicate the same thing - the extent to which the firm has retied on debt in financing assets. Leverage ratios are also computed form profit and loss items by determining the extent to which operating profits are sufficient to cover the fixed charges. *(Pandey; 1999:118)*

Activity Ratio

"Activity ratios are concerned with measuring the efficiency in assets management. Sometimes these ratios are also called efficiency ratios or assets utilization ratios. The efficiency with which the assets are used would be reflected the speed on rapidity with which the assets are converted into sales. The greater the rate of turnover or conversion, the ore efficient the utilization / management, other things being equal". *(Khan and Jain; 1993:90)*

Activity ratios measure how efficiently the firms are utilizing its resource or assets. Activity ratio is also called turnover ratio. Since it indicates efficiency with which the resources are being converted in turnover (sales).

Profitability Ratios

Profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. Profitability also indicates public acceptance of the product and shows that the firm can produce competitively. Moreover, profit provides the money or repaying the debt incurred to finance the project and the resources for the internal financing expansion. "Profit is the difference between revenues and expenses over a period of time(usually one year).Profit is the ultimate "Output" of the company". *(Kuchal; 1979:25)*

"The principal tool of financial statement analysis is financial ratios analysis which essentially involves a study of ratio between various items or group of items in

financial statements. Financial ratios may be divided into five broad types: liquidity ratios, turnover ratios, Leverage ratios, profitability ratios and valuation ratios.

Leverage refers to the use of debt finance. Two types of ratios are commonly used to analyse, leverage: structural ratios and coverage ratios. Structural ratios are based on the proportion of debt and equity in the financial structure of the firm. The important structural ratios are debt equity ratios and debt assets ratios. Coverage ratio reflects the relationship between debt servicing commitments and source of meeting these commitments. The most important coverage ratios are: Interest coverage ratio and fixed charge coverage ratio.

Turnover ratio also referred to as activity ratios or assets management ratios or assets management ratios, measure how efficiently the assets are employed by a firm. These ratios are based on the relationship between the level of activity and level of various assets. The important ratios are: Inventory turnover ratios, receivable turnover ratios, fixed assets turnover ratios and total assets turnover ratios.

Generally the financial ratios of a company are compared with some benchmarks ratios. Sometimes the ratios of a firm which is deemed to be representative may be used as benchmark. *(Chandra; 2002:156)*

Types of Ratios

Liquidity Ratio	Current ratio Liquid/quick/ Acid test Ratio
Leverage Ratios	Debt Equity Ratio. Debt to total Capital Ratio. Coverage Ratio
Activity Ratios	Inventory /Stock Turnover Ratio. Debtors Turnover Ratio. Average Collection Period. Fixed Assets Ratio. Total Assets Ratio.

	Capital Employed Turnover Ratio
Profitability Ratio	Gross Profit Margin Net Profit Margin Operating Ratio. Return to Shareholders Equity. Return on capital employed. Return on Assets. Return on Equity Capital. Earning per share. Dividend per share. Dividend yield ratio.

2.2.4 Predictive Power of Financial Ratios

Ratios can be used to predict the future of the company. A number of empirical studies have tested the predictive power of financial ratio. In many of these studies financial ratios are used to predict business failures. Other has tested the power of financial ratios to predict corporate bond ratings. With these ratios as dependent variables, regression analysis and discriminate analysis have been employed using various financial ratios for a sample of companies. On the basis of these studies it appears that a hand full f ratios can be used to predict the long term credit outstanding of a firm. Zeta model is a well known model to use the ratio to predict the future solvency of the firm. It was expanded by Altman and other

The Z- Score model itself was the following:

$Z=1.2x_1+1.4x_2+3.3x_3+0.6x_4+1.0x_5$

Where,

X_1= Working Capital

X_2= Cumulative retained earning to assets.

X_3= Earning before interest and tax to total assets.

X_4= Market value of equity to book value of total liablities.

X_5= Sales to total assets

The z-score is the overall index of the multiple discriminate functions. Altman found that companies with z score below 1.81 (including negative amount) always went bankrupt, where as z score above 2.99 represented healthy firms. Firms with z score between where sometimes misclassified. So, this represents an area of gray. On the basis of these cutoffs, Altman suggests that one can predict whether or not a company is likely to go bankrupt in near future. This model is more accurate in prediction but unfortunately the co-efficient are not published. It was developed by ZETA services, INC and the output consists of zeta scores for thousands of company. *(Manandhar and Bhattarai; 2005:19-20)*

2.2.5 Importance of Financial Performance Analysis

The analysis and interpretation of financial statement is an important accounting activity. There are different parties interested in it. Their aims and objectives of analysis are also differing significantly. The followings are the uses of financial performance analysis different parties.

a) Financial Executives

The first party interested in the financial performance analysis is financial department. Such analysis provides a deep insight into the financial condition of the enterprise and a view of the past performance which helps in future decision making to the financial manager. This means, analysis is not only gives vital information's concerning the position of the enterprise but also reflects the result of the operations

b) Top Management

The top management is also interested in the analysis of financial statements because it helps them in reaching conclusion regarding, performance appraisal of overall business activities ,inquire about current financial position,question concerning the

relationship of earning to sales,question concerning the relationship of earning to investment etc.

Creditors

The financial analysis is also very useful to the creditors. They are interested to know overall financial performance indicates the financial position and it helps to judge the soundness and worthiness of the firm. Moreover, they get all information from the analysis of balance sheet and income statement of the company. All the creditors want to be secure on their investment.

c) Investors and Others

Investors are also interested in the measurement of earning capacity of the security. They have been concerned with cash generation capability of an enterprise. For this purpose financial performance analysis has proved very useful.

Besides the above mentioned parties, the information provides the analysis and interpretation of various financial statements are important and useful to those groups who are interested in the working of the business and their unions, government, consumers and general public.

2.3 Review of Related Studies

2.3.1 Review from Books

Financial statement analysis primarily includes income statement, balance sheet and cash flow statement. They are the real document of the firm to analyze the real financial strength. However, financial healthiness of any firm can be tested through developing certain relationship between the different items of the financial statements. So, before the firm starts sophisticated forecasting and master budgeting procedure, the financial analysis is very key tool for financial decision this approach is to find out the quantitative selection, which would be used to diagnose strength and weakness in the firms performance. Those discovered data will be in concern of different interest groups of the firms like common stockholders, investor's long term and short term creditors, government, customers etc. In addition to financial policies will be directly influenced in the financial performance. Therefore, it is the base for the firms like

common stockholders, investor's long term and short-term creditors, government, customers etc. Moreover financial policies will be directly influenced in the financial performance. Therefore, it is the base for the firm's survival, growth and expansion" *(Regmi; 2007: p97)*

The analysis of financial statement consist on analysis of total components of statements so as to restore some short of homogeneity among the statements data to interpret of financial statement require comparison between the items which are include in statement owing to fact that more examination of the composition of the statement has to be discussed into its constituents in order to measure the relative magnitudes of the various entities". *(Lamichhane; 2008:16)*

Financial Analysis is key for financial decision making and for making plans and programme before using sophisticated forecasting and budgeting procedures. The value of this approach is to form the quantitative relationship, which can be used to diagnose strength and weakness in a firm's performance. Such analysis is considerable thing for the company's, common stockholders, stockholders, investor's bondholders and others. Financial policies of any concern are directly or indirectly influenced by the financial performance Thus it is a base of a firm, growth and expansion. *(Gupta; 2009:75)*

2.3.2. Review from Journals

"Starting with the recording death and covering the dead, and sanitation of towns, public health gradually become involved in the control of communicable diseases and quarantine, food hygiene, housing water supply drainage, environmental pollution, town planning , laboratories for health hazards and the production of immunizing agents, hospitals the health of families , particularly of mothers and children, the health of school children and occupational mental health from its earliest stage of development, the means it used for revolutionizing adverse heath factors is " the sustainable application of work through flexible budgeting, monitoring and co-operation with other social agencies, staff education, management and better financial performance analysis". *(Shah;2006:15*

"Now a days vital statistics include birth, deaths, fatal deaths, marriage/ diverse/ separation etc. These statistics are taken and considered primarily form the point of

view of physical mental and social well being of the whole community and at an individual. Though the mortality rates declining to a very low level can not indicate that health status of the commodity. That is why health status of any commodity cannot be judged by mere death or vital statistics but it should include more morbidity statistics as well. Therefore, now it is not said just vital statistics, in the context of health of the community and in relation to the state of environment, socio, cultural and demographic factor. The main objectives and vital statistics are applicable in administration, research and financing *(Baruwal; 2006:45)*

2.4 Research Gap

Research Gap is a gap between the study and study held in previously on the same or related subject matter, which clearly shows the tremendous difference between the current studies. The research may be different in its objectives, Methodology, presentations, analytical tools or all of these. There is no meaning of research when research gap is not maintained. Research gap must be maintained by a researcher for being obedient on partial fulfillment of the any degree.

In my opinion this is the first study of Financial Performance between Two hospitals in the field of management degree. I have found research regarding Ratio analysis of two banks more and more rather than study. I am very much interested to study about this topic to find out the hospital's financial performance. The study is mainly focused on financial performance analysis of two hospitals. The study also describes about Hospitals and Medical college in Nepal as well as what was the condition of health care system in Nepal. Origin of Hospital as well as recent investigation and new technology in hospital care system. The history of medical practice in Nepal is relatively short, prior to 1951; Nepal was under an autocratic regime, which kept a strict control over the control of medical education and health facilities into the country. The development of health facilities depended on the wishes of the ruling class, not on the identified needs of the people. There were very few health institutions and the number of qualified doctors was around 20 in 1951, which year marked the onset of democracy in Nepal. It's very necessary to open health and medical sectors to help the country's people and to develop the best health practioners in Nepal.

Under this study, I used to collect more and more information about hospital, healthcare management and recent development in the field of medical informatics, new technology about patient care system and disease control. Although my research is based on Financial Performance but I tried to collect more and more information regarding healthcare and disease control system because I am doing research regarding two hospitals.

- There is no previous study about financial performance in hospital areas.
- The study has focused mainly on the hospitals liquidity, debt, sales and profitability, efficiency and value position.
- Primary data also has been collected to examine the financial performance of NMCTH and KMCTH and analysis is based upon the present information provided by the people.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

"Research design is the plan structure and strategy for investigation conceived so as to obtain answer to research questions and to control variance. The plan is the overall scheme or programme of research. It includes an outline of what the investigator will do implications to the final analysis of data. The structure of research is more specific. It is the outline, the scheme, the paradigm of the operation of the variables. When we draw diagrams that outline the variables and their relation and juxtaposition, we build structural schemes for accomplishing operational research purposes. Strategy, as used here, is also more specific than plan. In other words, strategy implies how the research objectives will be reached and how the problems encountered in the research will be taking". *(Kerlinger;1986:275)*

The study is based on two types of research designed i.e descriptive and analytical. Descriptive research describes the general trend and pattern of financial performance of Nepal Medical College Teaching Hospital and Kathmandu Medical College Teaching Hospital. Hence, the study aim at portraying accurately upon the financial performance other aspects related to finance the two Medical College Teaching Hospitals.

3.2 Sources of Data

This study is based on both primary and secondary data are collected through the shareholders, administrators, staffs and other concerned people to the medical college and the secondary data are collected from their respective annual reports especially from profit and loss account, balance sheet etc. So, major sources of data are as follows.

- Financial records of Kathmandu Medical College Teaching Hospital.

- Annual records of Nepal Medical College Teaching Hospital.
- Related Studies.

3.3 Population and Sample

Now days, the number of hospitals have been increasing in private sector. Out of them two hospital of Nepal, two medical college has been selected for the sample study, NMCTH and KMCTH for finding out strength and weakness of medical college teaching hospital. The sample size is chosed from the location basis in Kathmandu valley. The NMCTH and KMCTH are two private sector's hospital in Kathmandu valley. So, I choose two hospitals for my study.

3.4 Procedures of Data Collection Techniques

The required data has been collected in a period of 3 months. To collect the various data the researcher has visited various bookshops library Kathmandu Medical College Teaching Hospital and Nepal Medical College Teaching Hospital as well as other hospitals of Kathmandu. So, the data collection technique is completely field visit. Depending upon the data .The researcher has been collected and has been drawn an outline of reporting prior to actually starting the write up. This has helped her in arranging ideas in a better way. The data after then has been arranged in some sequential order for meaningful presentation.

The researcher has tried to keep a valuable thought about financial performance for each and every step of writing. The appropriate financial and statistical tools has been applied by researcher to measure the financial performance of Nepal Medical College Teaching Hospital and Kathmandu Medical College Teaching Hospital

3.5 Method of Analysis

The appropriate analytical tools has been tried to apply by the researcher to obtain the specified objective. At first the collected data has been scanned and tabulated under various topic. After the data are tabulated, various tools have been used to achieve the results. Basically, ratio analysis has been applied as a financial tool to measure the

financial performance of two MCTHS. And an average, standard deviation, co-efficient of correlation, co-efficient of variance, probable error and hypothesis testing methods have been applied as statistical tools to obtain the objective of the study. Here is the brief discussion of the tools, which are used to analyse the financial performance of two MCTH.

3.6 Financial Tools

In this research study various financial tools are applied to meet the objectives. The following are the ratio analysis tools related to study.

3.6.1 Liquidity

Liquid assets are those assets which can be converted into cash quickly.. Thus a higher ratio would indicate a greater liquidity and lower risk for short term lenders. The rule of thumb (for an acceptable value): current ratio (2:1) and Quick Ratio (1:1)

3.6.2 Analyzing Debt

The ratio used to analyze the debt show the extent to which a firm is relying on debt to finance its investments and how well it can manage the debt obligation (i.e repayment of principal and periodic interest) obviously, if the company is unable to repay it's debt or make timely payments of interest, it will be forced into bankruptcy. On the positive side use of debt is beneficial as it provides valuable for beneficial to the firm and allows it to the firm and allows it to exploit business opportunities and grow. The total debt should include both short term debt (bank advances debt (such as bonds, leases and notes payable).In leverage ratio debt equity ratio and total debt ratio was used to calculate leverage ratio of firm.

Total debt ratio shows what proportions of the assets have been financed with borrowed funds. For a lender, more important than the degree of leverage is firm's ability to service the debt and this is captured by the ratio, the lower the total debt ratio, the more conservative (and probably safer) the company.

However, if a company is not using debt, it may be foregoing investment and growth opportunities. The interest coverage ratios show the firm's ability to cover fixed interest changes (on both short term and long term debt). The margin of safety that is acceptable will vary within and across industries and will also depend on the earnings history of a firm (especially the consistency of earning form period to period and year to year)

Net cash flow is equal to Net income ± non cash item (- equity income + minority interest in earnings of subsidiary + deferred income taxes + depreciation + depletion + amortization expenses). Since depreciation is the biggest solar term, oftentimes analysis would approximate Net cash flow as being equivalent to net income depreciation.

Cash flow is a "critical variable" in assessing a company. If a company is showing strong profits but has poor cashflow, you should investigate further before passing a favorable opinion on the company. Financial analyses prefer using cashflow coverage ratio is more widely reported.

3.6.3 Analyzing Sales and Profitability

Profitability is a relative term. It is hard to say " what percentage of profit" represents a profitable firm as the profits will depend on the product life cycle (for example profits will be lower in the initial years)competitive conditions in the market borrowing costs, expenses management etc. profit can also be analyzed using the framework of CVP (cost volume prices). Analysis will be interested in the (historical and forecasted)"trend" of sales/ expenses/ profits are the profits generally on the rise, are the sales stable or rising , how do profits compare to the industry average is the market share of the company rising/stable/falling? Are the expenses rising, stable or falling? Are the expenses rising, stable or falling? The set of ratios here include some of the traditional earnings based performance measures such as ROA, ROI and ROE.

For decision making, we are concerned only with the present value of expected future profits, past or the current profits are important only as they help us to identify likely future profit, by identifying historical and forecasted trend of profits and sales.

3.6.4 Analyzing Efficiency

Ratios to analyze the efficiency of firms reflect how well the firm's assets are being managed. The inventory ratios show how fast the inventory is being produced and sold. Ratio 1 shows how quickly the inventory is being turned over (or sold) to generate sales. Higher ratio implies the firm is more efficient in managing inventories by minimizing the investment in inventories. Thus a ratio of 12 would mean that the inventory turns over 12 times or the average inventory is sold in a month. Obviously, this ratio should be higher for selling perishable goods relative to car dealer. Some tests prefer to use "ending inventory" rather than average inventory. High ratio by itself doesn't mean high level of efficiency as high ratio could also mean shortages. Ensure that there has been no change in inventory reporting period (LIFO FIFO) during the analysis period. The efficiency ratios which can be calculated by Inventory turnover ratio.

This ratio shows how quickly the inventory is being turned over (or sold) to generate sales. A higher ratio implies the firm is more efficient in managing inventories by minimizing the investment in inventories. Thus a ratio of 12 would mean that the inventory turns over 12 times, or the average inventory turns over 12 times or the average inventory is sold in a month.

Days in inventory is referred to as the "Self life" i.e how quickly the manufactures product is sold off the shelf.

Total assets turnover ratio which shows how much sales the firm is generating for every dollar of investment in assets. The higher the ratio the better the firm if performing.

Average collection period which shows the firms efficiency in collecting cash from its credit sales. While a low ratio is good, it could also mean that the firm is being very strict in its credit policy, which may not attract customers.

3.6.5 Analyzing Value

Earning per share is widely reported although it is new less closely followed (after academic theory insights into drawback of EPS and importance of cash flow based measures. Basic EPS uses the actual number of shares currently outstanding in the market while diluted EPS uses currently outstanding shares all potential shares, Dividend yield, while widely reported, may not contain much useful information by itself (especially when comparing across firms) since dividend policy very across firms Furthermore, price appreciation (as opposed to dividends) is the more important source of yield for shareholders.

Value ratios such as PE ratio show the "embedded value" in stocks and are used by the investors as a screening device before making their investment. For example, a high P/R ratio may be regarded as being a sigh of "Over Pricing". When the markets are bullish or if the investor sentiment is optimistic about a particular stock, P/E ratio will tend to be high indicating that investors are willing to pay high price for company's earnings, On the other hand it may simply be priced too low based on its potential earnings. The low P/E ratio may show that the company has a poor track record. The ratios can be calculated as earnings per share, earnings yield, cash flow per share. The formula for calculating ratio analysis are described below.

Types of Ratios

Liquidity Ratio	Current ratio Liquid/quick/ Acid test Ratio
Leverage Ratios	Debt Equity Ratio. Debt to total Capital Ratio. Coverage Ratio
Activity Ratios	Inventory /Stock Turnover Ratio. Debtors Turnover Ratio. Average Collection Period. Fixed Assets Ratio.

	Total Assets Ratio. Capital Employed Turnover Ratio
Profitability Ratio	Gross Profit Margin Net Profit Margin Operating Ratio. Return to Shareholders Equity. Return on capital employed. Return on Assets. Return on Equity Capital. Earning per share. Dividend per share. Dividend yield ratio.

3.7 Statistical Tools

For analyzing the data following statistical tools are used to meet the objectives of the research .The following tools were used with SPSS for windows 12.0 and Phstat software for calculating the values of variables.

3.7.1 Arithmetic Mean ($\overline{X}$)

For analyzing and interpreting the data and information the following statistical tools are used in research.

In general X1+X2+X3……XN) are given n observations, then their arithmetic mean. Usually denoted by x in given by

$$\overline{X} = \frac{(x1+x2+x3\ldots\ldots\ldots\ldots\ldots\ldots x_n)}{n}$$

3.7.2 Standard Deviation

Standard Deviation usually denoted by the letter small sigma of the Greek letter. It is defined as the positive square root of the arithmetic mean of the squares if the deviations of the given observations from their arithmetic mean.

$$\text{S.D} = \frac{\sqrt{\sum X^2}}{N} - \frac{(\sum X)^2}{N}$$

3.7.3 The Co-efficient of Variation (C.V.)

It is a measure used to compare relative variability. The variation of the same character in two or more different series has to be compared quite often. It may be of interest to know whether the weight varies more in spleens or in hearts, growth varies more in girls or in boys, variation of pulse rate is more in young or in old, or in students appearing in for the examinations and in others not doing so.

A statistical measure of the dispersion of data points in a data series around the mean. It is calculated as follows:

$$\text{C.V} = \frac{\text{S.D}}{\bar{X}} X \ 100$$

The coefficient of variation represents the ratio of the standard deviation to the mean, and it is a useful statistic for comparing the degree of variation from one data series to another, even if the means are drastically different from each other.

3.7.4 Test of Hypothesis for Small Samples T-Test

The test of hypothesis is a process of testing the significance regarding the parameter of the population on the basis of the sample of the drawn from the population. In order to decide whether the difference seen in mean values of the ratios are significant or not a proper test statistics namely t-test is used as the sample size is small (n<30) and the formula is as follows:

Test Statistics $t = \dfrac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\dfrac{1}{n_1} + \dfrac{1}{n_2})}}$

Where,

$\overline{X}_1 = \sum X_1 / N_1$

$\overline{X_2} = \sum X_2 / N_2$

$S^2 = \dfrac{1}{n_1 + n_2 - 2\left[\sum X_1^{\,2} + \sum X_2^{\,2}\right)}$

Formulation of Hypothesis

The following statistical hypothesis will be formulated.

Null and Alternative Hypothesis

The following null hypothesis (Ho) is stated for the purpose of possible acceptance against the alternative hypothesis (H1).

Ho: $\overline{X}_1 = \overline{X_2}$ i.e, there is no significant difference between the mean values of NMCTH and KMCTH against the alternative hypothesis

(H1): $\overline{X}_1 \neq \overline{X_2}$, i.e, there is a significant difference between the mean values of the ratios of the two hospitals.

Critical Values

All the values computed so far will be tested at 5% level of significance. The tabulated value for | t |x = 0.05=2.37 for 8(5+5-2) degrees of freedom (d.f) for two tailed test.

Decision

If the tabulated value of | t | is smaller than tabulated value, null hypothesis is accepted and vice versa.

3.7.5 Karl Pearson's Co-efficient of Correlation (r)

Karl Pearson's coefficient of correlation (r) is one of the mathematical methods of measuring the degree of correlation between any two variables X and Y usually denoted by (r) is a numerical measure of linear relationship between them(gupta,1995:115).

$$R = \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 X \sqrt{N\sum y^2} - (\sum y)^2}}$$

Where,

R = Karl Pearson's coefficient of correlation.

N = Number of Observation in series X and Series Y.

$\sum X$ = Sum of the observation in series X

$\sum Y$ = Sum of the observation in series Y.

$\sum X^2$ = Sum of the squared observation in series X

$\sum Y^2$ = Sum of squared observations in series Y.

$\sum xy$ = Sum of the product of the observations in series X and series Y.

Probable Error (p.e)

It is used to help in the determination of the Karl Pearson's coefficient of correlation 'r '. Due to this 'r' is corrected to a great extent but note that 'r' depends on the random sampling and its conditions. it is given by

Probable error (P.E.) = 0.0745 X $\frac{1-r^2}{\sqrt{N}}$

Where,

$\frac{1-r^2}{\sqrt{N}}$ is more standard error of the co-efficient of correlation ?

The co-efficient for taking the factor 0.6745 is that, in a normal distribution, 50% of the observations lie in the Range on ± 0.67456.

i. If the value of r is less than P. E., then there is no evidence of correlation i.e. r is not significant.
ii. If r is more than 6 times the P. E. ‘ r ’ is practically certain .i.e. significant.
iii. By adding or subtracting P. E. to ‘ r ’ , we get the upper and Lower limits within which ‘ r ’ of the population can be expected to lie.

Symbolically e = r ± P. E.

3.7.6 Test of Hypothesis for Observed Data

Chi-square test was propounded by the Karl Pearson in the 1990.Chi-square, symbolically written as $\chi 2$, as non parametric test is a statistical measure which can be used to determine the dependent or independent of any two attributes. Chi-square is a statistical measure which can be used to determine the dependent or independent of any two attributes are associated. For this instance, the researcher has been interested to know whether technically, socially and is associated towards establishing hospital or not. The following are the steps to satisfy the test of hypothesis.

Attribute

Mostly, statistics deals with quantitative phenomenon only or the statistics may measure actual magnitude or size of some phenomenon. For example, measuring the height or weight of characteristics can be measured quantitatively and data regarding such phenomena are known as statistics of variable.

But, sometimes statistics may deal with variable of qualitative phenomena or the statistician may measure certain phenomena like blindness, deafness, literate, illiterate, interested, awareness etc which are not capable of direct quantitative measurement. Here, the quantitive character arises only indirectly in this process of counting. For example measuring of awareness out of 150 person is not possible but statistician can determine how many aware or not, not possible but statistician can determine how many aware or not. So, such phenomena, where statistician can study

only the presence or absence of a particular characteristic are called statistics of attributes.

Step I: Setting of Null Hypothesis

In the presence of hypothesis testing the first step is setting null hypothesis and it is presented in a very systematic way and it is generally denoted by Ho The null hypothesis means hypothesis of difference.

Hence,

Ho = There is no relationship between two attributes i.e two attributes are independent.

Step-II: Setting of Alternative Hypothesis

The researcher also has to specify a hypothesis that will accepted if null hypothesis is rejected. Such hypothesis is called alternative hypothesis. It is denoted by H1. The alternative hypothesis means hypothesis of difference.

Hence,

H1 = There is relationship between two attributes i.e two attributes are dependent.

Step-III: Determining the Level of Significance

Since selection of sample units from the population is completely random process and it depends upon the chance and therefore there is direct relationship between sample information and error decision. Thus committing error in the decision process depends upon the chance and it can be expressed in probability. The chance of being error is mathematically denoted by the level of significance (α) has been determined as 5%.

Step-IV: Chi-square test describes the magnitude of discrepancy between the theory and observation. The value of chi-square is determined as follows:

$$(\chi 2) = \sum (O - E)^2 / E)$$

Where,

$(\chi 2)$ = Chi-Square

O = Observed Frequency.

E= Expected Frequency.

Expected Frequency (E) = (RT X CT)/N

Where,

RT=Row Total.

CT=Column Total

N= Grand Total

Step-V: Degree of Freedom

The number of data that are given in a form of a serious of variables in a row or column or frequencies that are put in a contingency table and which can be calculated as :

υ = (R-1) X (C-1)

Where,

υ = Degree of freedonm

r = no of rows

c = no of columns

Under this degree of freedom the tabulated value of $\chi 2$ as a fix 5% percent of level of significance is noted for comparing the calculated value of chi-square.

Step –VI: Comparisons of Values

Under this stage the calculated values are compared with the tabulated value of chi-square whether it is more or not. The comparison is a base line for the decision making so it is an important stage of testing hypothesis**.**

Step-VII: Decision

Under this stage the calculated values are compared with the tabulated value of the chi-square is less than the tabulated value, null hypothesis is accepted otherwise alternative hypothesis is accepted.

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

The data collected have been analyzed and interpreted through financial and statistical tools viz, ratio analysis, T-Test analysis, Correlation T-test and chi-square test for primary data.

4.1 Analysis of Performance

A hospitals annual presents two important type of information. The first is a verbal statement of a company's recent operation and its expectation for coming year. The second is a set of quantitative financial statements, which is a set of quantitative financial statements, which report what actually happened to the firm's financial position earnings and dividends over the past years.

Fundamental Analysis has a very broad scope. One aspect looks at the general (qualitative) factors of a company. The other side considers tangible and measurable factors (quantitative). This means crunching and analyzing numbers from the financial statements. If used in conjunction with other methods, quantitative analysis can produce excellent results. Ratio analysis isn't just comparing different numbers from the balance sheet, income statement, and cash flow statement. It's comparing the number against previous years, other companies, the industry, or even the economy in general. Ratios look at the relationships between individual values and relate them to how a company has performed in the past, and might perform in the future.

4.1.1 Short-term Solvency or Liquidity Ratio

Short-term Solvency Ratios attempt to measure the ability of a firm to meet its short-term financial obligations. The two most important Short-term Solvency Ratios are the Current Ratio and the Quick Ratio. (Note: the Quick Ratio is also known as the Acid-Test Ratio).

4.1.1.1 Current Ratio

The Current Ratio is calculated by dividing Current Assets by Current Liabilities. However, at a minimum, the Current Ratio should be greater than one.

Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

Table 4.1

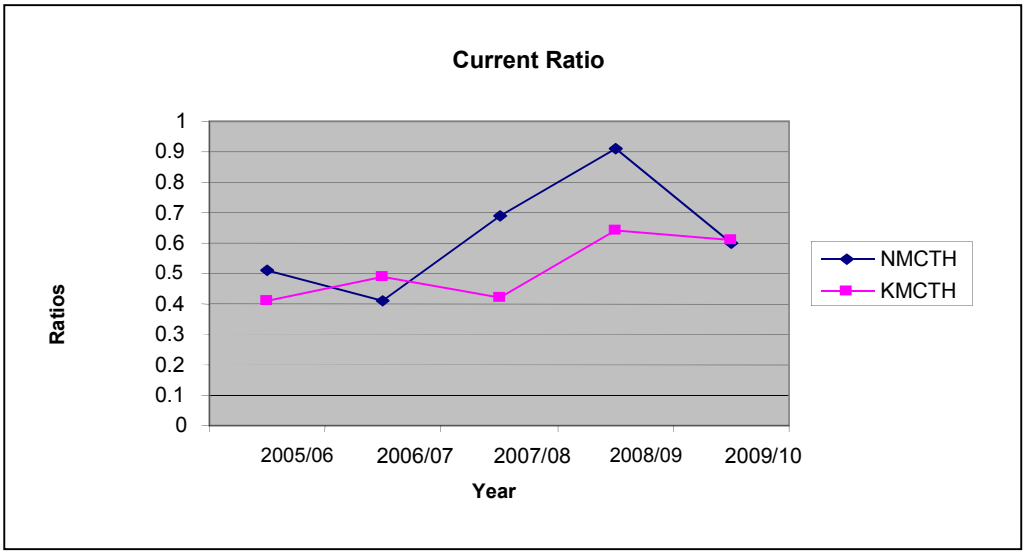
Rs (in '000)

Current Assets to Current Liabilities Ratio

Fiscal Year	NMCTH			KMCTH		
	Current Assets	Current Liablities	Ratios	Current Assets	Current Liablities	Ratios
2005/06	46659.2	90893.30	0.51	28478.50	72483.10	0.41
2006/07	32037.70	77639.0	0.41	31694.30	64865.90	0.49
2007/08	49309.60	70965.20	0.69	27645.80	65804.0	0.42
2008/09	46665.80	50771.50	0.91	43628.30	71478.50	0.64
2009/10	53010.0	88518.20	0.60	50403.20	82654.40	0.61
Mean			**0.62**	**Mean**		**0.51**
Standard Deviation			**0.1907**	**Standard Deviation**		**0.1064**
Co-efficient of Variation			**0.3076**	**Co-efficient of Variation**		**0.2087**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.1



The current ratio of NMCTH is range between 0.41 to 0.91 and average ratio during the study period of the same hospital is 0.62 in times. Similarly this ratio of KMCTH is range between 0.41 to 0.64 and average ratio during the research period of the same hospital is 0.51, in times. The average current ratio of NMCTH is considerably greater than that of KMCTH by 0.11 times. It shows NMCTH is slightly better than that of KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 20.87% < 30.75%.It indicates that the variability of ratio of NMCTH is more uniform than KMCTH.

4.1.1.2 Quick Ratio

The Quick Ratio recognizes that, for many firms, Inventories can be rather liquid. If these Inventories had to be sold off in a hurry to meet an obligation the firm might have difficulty in finding a buyer and the inventory items would likely have to be sold at a substantial discount from their fair market value.

Use: Same as Current Ratio Except that it Excludes Inventory and Other Prepaid Items from Current Assets. It is a More Severe Test of the Firm's Debt Paying Ability in the Short - Term.

$$\textbf{Quick Ratio} = \frac{\textbf{Current Assets- Closing Stock}}{\textbf{Current Liablities}}$$

Table 4.2

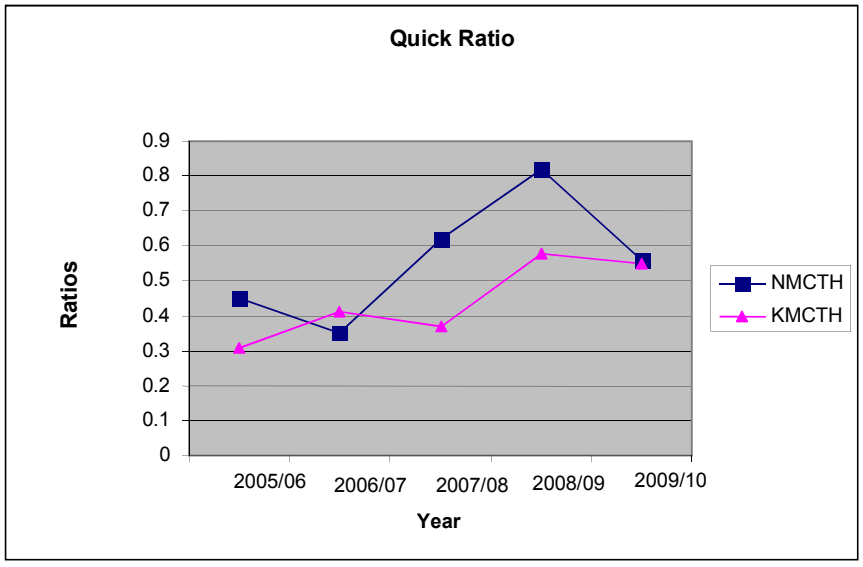
Quick Assets Ratio

Rs (in '000)

Fiscal Year	NMCTH			KMCTH		
Ratios	Quick Assets	Current Liablities	Ratios	Quick Assets	Current Liablities	Ratios
2005/06	41105.80	90893.30	0.45	22649.30	72483.10	0.31
2006/07	27216.70	77639.0	0.35	26408.70	64865.90	0.41
2007/08	44345.0	70965.20	0.62	24311.10	65804.0	0.37
2008/09	41756.90	50771.50	0.82	41426.70	71478.50	0.58
2009/10	49856.40	88518.20	0.56	45484.30	82654.40	0.55
		Mean	**0.56**		**Mean**	**0.44**
		Standard Deviation	**0.1784**		**Standard Deviation**	**0.1165**
		Co-efficient of Variation	**31.86**		**Co-efficient of Variation**	**26.48**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.2



The quick ratio of NMCTH is range between 0.35 to 0.82 and average ratio during the study period of the same hospital is 0.56, in times. Similarly, this ratio of KMCTH is range between 0.31 to 0.58 and average ratio during the study period of same hospital

is 0.44, in times. It also shows that the ability to pay the short term obligation quickly, of NMCTH is slightly better than that of KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 26.48% < 31.86%.It indicates that the variability of ratio of NMCTH is more uniform than KMCTH.

Overall Liquidity Performance of NMCTH and KMCTH

The rule of thumb in the world of finance is that a firm should balance 2:1 current ratio and 1:1 quick ratio but the study shows very low current ratio and quick ratio both on NMCTH and KMCTH. The liquidity performance of he NMCTH is slightly better than KMCTH but both have poor performance. Due to lack of liquidity both hospitals' may loose their several opportunities like, could not able to purchase sufficient material on time, couldn't pay salary to staff on time, couldn't able to take the opportunities s of earning modern equipment from international markets.

4.1.2 Debt Ratios

Debt Management Ratios attempt to measure the firm's use of Financial Leverage and ability to avoid financial distress in the long run. These ratios are also known as Long-Term Solvency Ratios.

4.1.2.1 Debt to Equity Ratio

Debt magnifies the shareholder's earnings as well as increasing risk. This ratio is calculated by dividing the total debt shareholders' equity capital.

$$\textbf{Debt- Equity Ratio} = \frac{\textbf{Total Debt}}{\textbf{Total Equity}}$$

Table 4.3

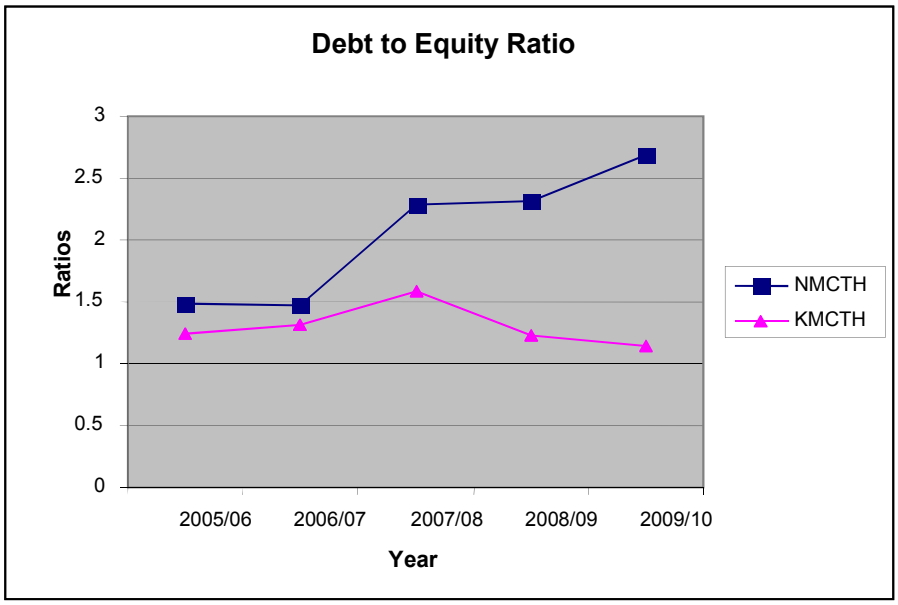
Rs (in '000)

Debt to Equity Ratio

Fiscal Year	NMCTH			KMCTH		
	Total Debt	Total Equity	Ratios	Quick Assets	Current Liablities	Ratios
2005/06	183610.0		0.45	22649.30	72483.10	0.31
2006/07	191128.50		0.35	26408.70	64865.90	0.41
2007/08	295874.50		0.62	24311.10	65804.0	0.37
2008/09	318141.90		0.82	41426.70	71478.50	0.58
2009/10	348088.80		0.56	45484.30	82654.40	0.55
		Mean	**2.05**		**Mean**	**1.31**
		Standard Deviation	**0.5443**		**Standard Deviation**	**0.1687**
		Co-efficient of Variation	**26.55**		**Co-efficient of Variation**	**12.88**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.3



The Debt Equity ratio of NMCTH is range between 1.47 to .69 and average ratio during the study period is 2.05, in times. Similarly, debt equity ratio of KMCTH is range between 1.15 to 1.59 and average ratio during the research period is 1.31, in

times. The average debt- equity is greater of NMCTH and KMCTH by 1.64.It shows that the capital structure of NMCTH is more leveraged than KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 12.88 %< 26.55 It indicates that the variability of ratio of KMCTH is more uniform than KMCTH.

4.1.2.2 Debt to Total Assets Ratio

Total debt ratio is the relationship between the total debt and total assets. This ratio shows that what proportion of the assets have been financed with borrowed fund.

$$\textbf{Total Debt Ratio} = \frac{\textbf{Total Debt}}{\textbf{Total Assets}}$$

Table 4.4

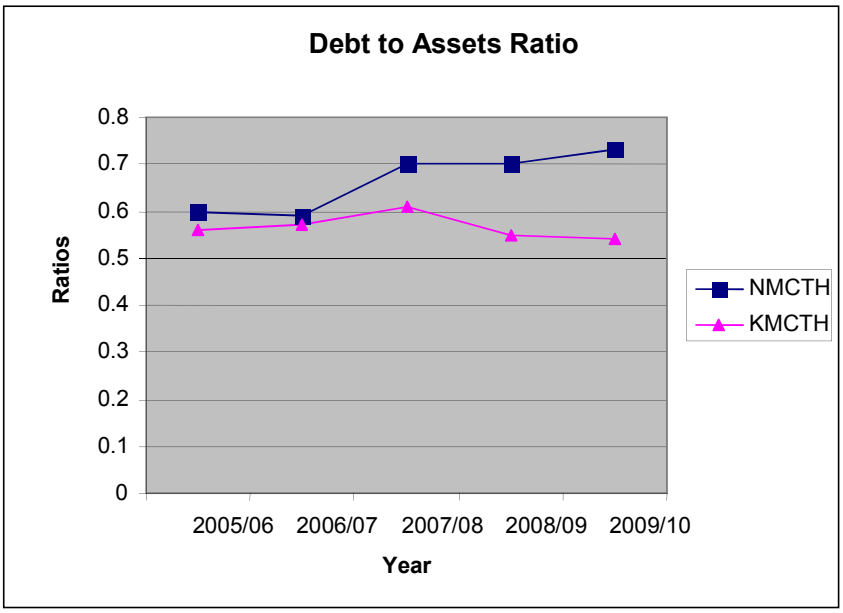
Rs (in '000)

Debt to Total Assets Ratio

Fiscal Year	NMCTH			KMCTH		
	Total Debt	Total Assets	Ratio	Total Debt	Total Assets	Ratio
2005/06	183610.0	307797.40	0.60	122248.30	220104.70	0.56
2006/07	191128.5	32442.20	0.59	132602.0	233954.40	0.57
2007/08	295874.50	425378.70	0.70	134323.40	218902.0	0.61
2008/09	318141.90	425378.70	0.70	138694.0	251137.20	0.55
2009/10	348088.80	455079.0	0.73	141578.60	264219.20	0.54
Mean			**0.66**	**Mean**		**0.57**
Standard Deviation			**0.0642**	**Standard Deviation**		**0.0270**
Co-efficient of Variation			**9.73**	**Co-efficient of Variation**		**4.74**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.4



The Debt Equity ratio of NMCTH is range between 0.59 to 0.73 and average ratio during the study period is 0.66 in times. Similarly, debt equity ratio of KMCTH is range between 0.54 to 0.61 and average ratio during the research period is 1.31, in times. The average debt- equity is greater of NMCTH and KMCTH by 0.12.It shows that the capital structure of NMCTH is more leveraged than KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 4.74% < 9.73 %. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.2.3 Interest Coverage Ratio

The Interest Coverage ratio shows the number of time interest charged are covered by funds that are ordinary available for their payment. The ratio is calculated by dividing the EBIT by annual Interest expenses. The ratio of KMCTH and NMCTH is analyzed as follows.

$$\textbf{Interest Coverage Ratio} = \frac{\textbf{EBIT}}{\textbf{Annual Interest Expenses}}$$

Table 4.5

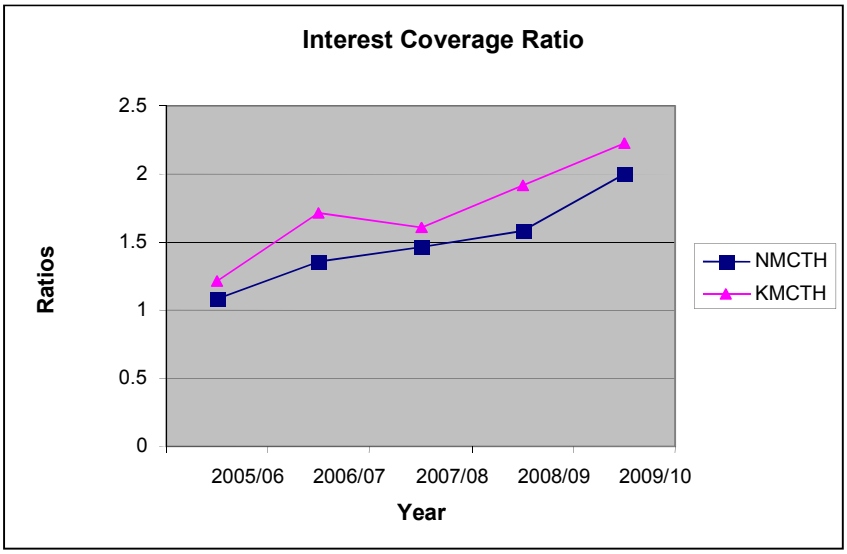
Rs (in '000)

Interest Coverage Ratio

Fiscal Year	NMCTH			KMCTH		
	Operating Profit	Interest Expenses	Ratios	Operating Profit	Interest Expenses	Ratios
2005/06	28371.80	26331.0	1.08	21434.50	17542.60	1.22
2006/07	40175.60	29611.50	1.36	34645.80	20089.20	1.72
2007/08	54500.50	37124.90	1.47	37691.20	23427.80	1.61
2008/09	66174.10	41886.30	1.58	41444.60	21624.20	1.92
2009/10	68938.70	34412.7	2.00	56218.70	25217.80	2.23
Mean			**1.62**	**Mean**		**1.74**
Standard Deviation			**0.3366**	**Standard Deviation**		**0.3742**
Co-efficient of Variation			**20.77**	**Co-efficient of Variation**		**21.50**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.5



The interest coverage ratio of KMCTH is range between 1.08 to 2.00 and average ratio during the study period is 1.62, in times. Similarly this ratio of KMCTH is range between 1.22 to 2.23 and average ratio during the study period if 1.74, in times. The average interest coverage ratio of KMCTH is higher than NMCTH by 0.12.It shows that KMCTH has better position for the capacity to make the payment of interest.

Likewise, the co-efficient variation between the ratios of NMCTH is less than KMCTH, i.e. 21.50 % < 20.77%. It indicates that the variability of ratio of NMCTH is more uniform than KMCTH.

4.1.2.4 Cash Flow Coverage Ratio

The cash coverage ratio assesses an organization's ability to meet cash obligations with current income. The higher the ratio, the more secure these payments. When an organization's cash flow coverage ratio drops below one (1), the organization is no longer able to cover its payments fully with its current cash inflows. When analyzing cash flow coverage for nonprofit organizations, it is imperative to assess the intended use for the surplus or factors that contributed to the loss. Nonprofits generally strive for a one-to-one coverage, however, at times, it may be necessary to use a strategic surplus or deficit to enhance future programs.

Cash flow coverage ratio = Net Cash flow after tax / Annual Interest Expenses

Table 4.6

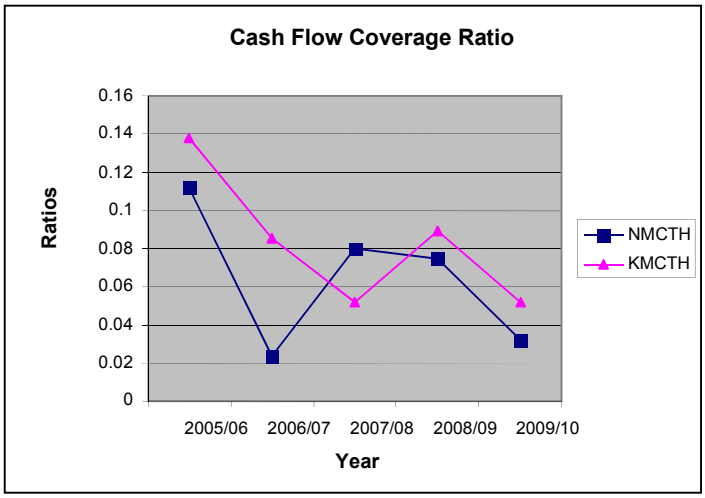
Cash flow Coverage Ratio

Rs (in '000)

Fiscal Year	NMCTH			KMCTH		
	Net Cash Flow	Interest Expenses	Ratios	Net Cash Expenses	Interest Expenses	Ratios
2005/06	2955.60	26331.0	0.112	2422.40	17542.60	0.138
2006/07	713.90	29611.05	0.024	1702.10	20089.20	0.085
2007/08	2962.20	37124.90	0.080	1214.80	23427.80	0.052
2008/09	3133.10	41886.30	0.075	1927.60	21624.20	0.089
2009/10	1098.50	34412.70	0.032	1318.50	25217.80	0.052
Mean			**0.065**	**Mean**		**0.073**
Standard Deviation			**0.0362**	**Standard Deviation**		**0.035**
Co-efficient of Variation			**55.71**	**Co-efficient of Variation**		**48.36**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.6



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The cash flow coverage ratio of NMCTH is range between 0.024 to 0.112 and average ratio during the study period is 0.625, in times. Similarly this ratio, of KMCTH is range between 0.052 to 0.138 and average ratio during the research period is 0.073, in times. The average cash flow coverage ratio of KMCTH is slightly greater than of NMCTH which also shows that KMCTH has a high amount of cash to make payment for interest during the research period.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 48.36% < 55.71 % It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

Overall Debt Performance of NMCTH and KMCTH

Debt to equity ratio and total debt ratio both show the capital ratios are high in amount on NMCTH. This indicates that NMCTH is using higher proportion of debt on its capital structure than KMCTH. So, NMCTH is a risky hospital than KMCTH. In general both hospitals are using debt to generate their capital at high proportion which carries a liability to make payment for the debt both as interest and principal. Interest coverage ratio of KMCTH is higher than NMCTH but for independent analysis both have poor earning, though the debt is very high. On the other hand cash flow of KMCTH is slightly better than NMCTH. Both hospitals' have poor cash position for

payment of interest on debt. The analysis concludes that NMCTH and KMCTH both are risky organization as they are using high proportion of debt on their capital structure but both organizations have poor servicing capacity. The debt performance of KMCTH is slightly better than NMCTH.

4.1.3 Sales and Profitability Ratios

Profitability ratio measures the degree of managerial success in achieving a firms overall goal. Sales are the basis of profit. Without making minimum level of sales no of the organizations can exist and make any profit. There is a better relationship between sales and profit. Higher the sales generates normally higher the profit and vice versa. Sales and profitability performance also indicates the public acceptance of the product or services and shows that the firm can produce how compositely.

4.1.3.1 Gross Margin Ratio

Gross margin ratio indicates the average spread between the costs and sales revenue. A high GMR is the sign of good management. A low gross margin may reflect higher CGS due to the firm's inability to purchase raw material at favorable terms. This ratio is calculated by dividing gross margin by total sales.

$$\textbf{Gross Margin Ratio} = \frac{\textbf{Gross profit}}{\textbf{Total Sales}}$$

Table 4.7

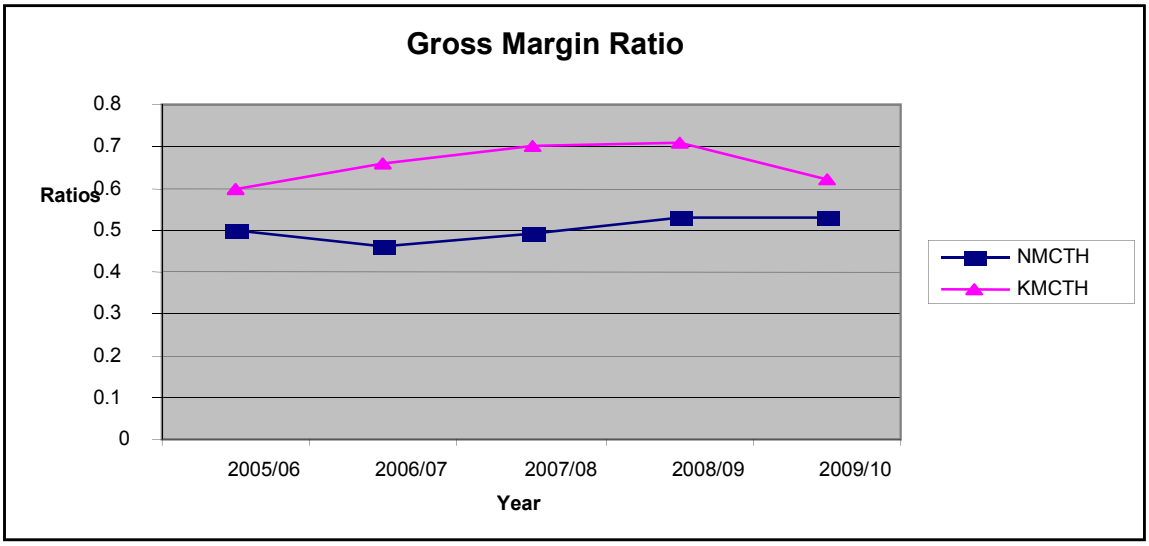
Gross Margin Ratio

Rs (in '000)

Fiscal Year	NMCTH			KMCTH		
	Gross Profit	Total Income	Ratios	Gross Profit	Total Income	Ratios
2005/06	61365.60	122290.40	0.50	56254.30	94288.50	0.60
2006/07	68890.10	149996.40	0.46	64366.40	97496.20	0.66
2007/08	81359.30	166059.20	0.49	71584030	102348.50	0.70
2008/09	90886.30	170992.20	0.53	79495.60	111406.20	0.71
2009/10	96230.0	180400.10	0.53	83264.0	134799.80	0.62
Mean			**0.50**	**Mean**		**0.66**
Standard Deviation			**0.0294**	**Standard Deviation**		**0.04816**
Co-efficient of Variation			**5.8991**	**Co-efficient of Variation**		**7.2979**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.7



The gross margin ratio of NMCTH is range between 0.46 to 0.53 and average ratio during the study period is 0.50, in times. Similarly Gross Margin Ratio of KMCTH is range between 0.60 to 0.71 and average ratio during the study period is 0.66.Average margin of KMCTH is more than the NMCTH. It shows the higher profitability of KMCTH than NMCTH.

Likewise, the co-efficient variation between the ratios of NMCTH is less than KMCTH, i.e. 7.29% < 5.81 %. It indicates that the variability of ratio of NMCTH is more uniform than NMCTH

4.1.3.2 Return on Assets (ROA)

The return on total assets is a useful measure of profitability. ROA evaluates the efficiency of the firm in generating surplus from each rupee of investment in assets. This ratio is calculated by dividing the net profit by total assets.

ROA = Net Profit
Total Assets

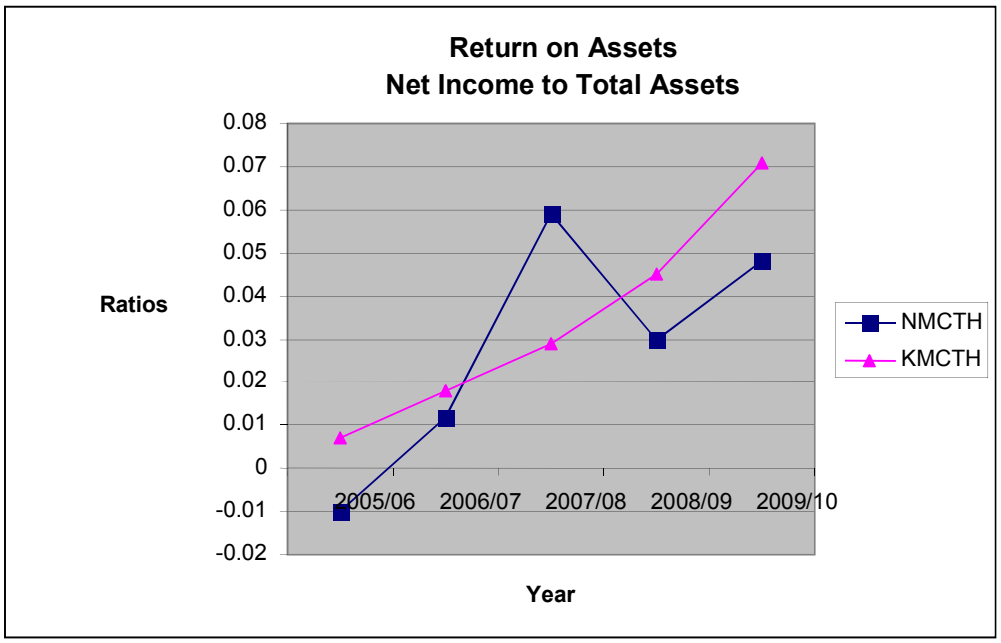
Table 4.8

Return on Assets **Rs (in '000)**

Fiscal Year	NMCTH			KMCTH		
	Net Income	Total Assets	Ratios	Net Income	Total Assets	Ratio
2005/06	(3120.3)	307197.40	(0.010)	1432.30	220104.70	0.007
2006/07	3942.0	321442.20	0.012	4218.60	233954.40	0.018
2007/08	25115.60	425378.70	0.059	6421.30	2189020.0	0.029
2008/09	13683.20	455079.0	0.030	11241.60	251137.20	0.045
2009/10	22860.10	477593.0	0.048	18795.80	264219.20	0.071
Mean			**0.028**	**Mean**		**0.034**
Standard Deviation			**0.0276**	**Standard Deviation**		**0.025**
Co-efficient of Variation			**98.85**	**Co-efficient of Variation**		**73.52**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.8



The Return on Assets of NMCTH is range between (0.010) to 0.059 and average ratio during the study period is 0.028, in times. Similarly this ratio of KMCTH is range between 0.007 to 0.071 and average ratio during the research period if 0.038.Average return of KMCTH is more than NMCTH. It shows the better profit position of KMCTH than NMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 73.52% < 98.85%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.3.3 Return on Sales

Return on sales refers to the efficiency on the utilization of the resources as well as the managerial skill to conduct the firms' activities. This ratio is calculated by dividing Net Income by total Assets.

$$\textbf{Return on Sales} = \frac{\textbf{Net Income}}{\textbf{Total Sales}}$$

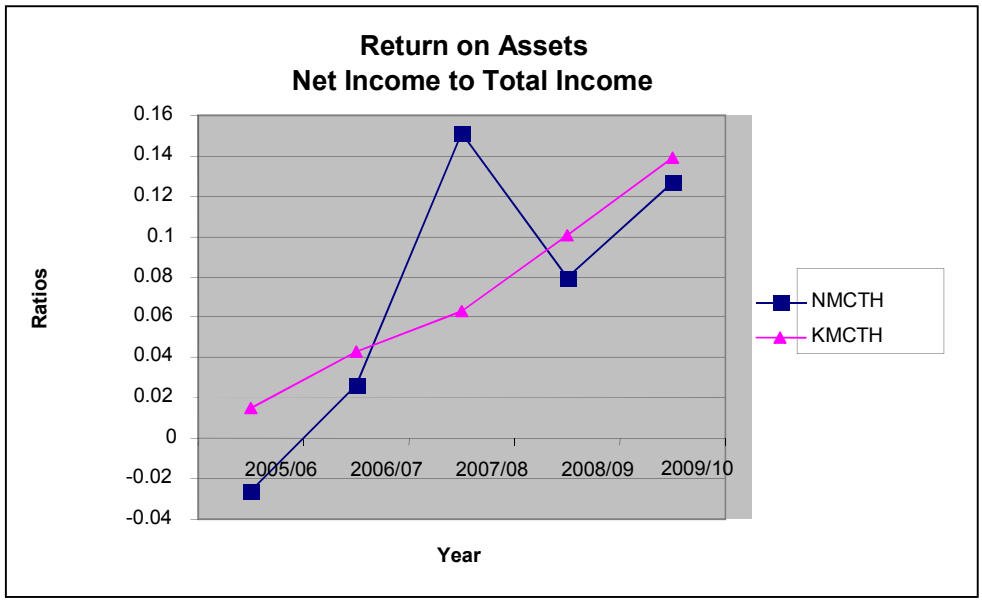
Table 4.9

Return on Assets **Rs (in '000)**

Fiscal Year	NMCTH			KMCTH		
	Net Income	Total Income	Ratios	Net Income	Total Assets	Ratio
2005/06	(3120.3)	122290.40	(0.026)	1432.30	94288.50	0.015
2006/07	3942.0	149996.40	0.026	4218.60	97496.20	0.043
2007/08	25115.60	166059.20	0.151	6421.30	102348.50	0.063
2008/09	13683.20	170992.20	0.080	11241.60	111406.20	0.101
2009/10	22860.10	180400.10	0.127	18795.80	134799.80	0.139
Mean			**0.072**	**Mean**		**0.070**
Standard Deviation			**0.07254**	**Standard Deviation**		**0.048736**
Co-efficient of Variation			**100.75**	**Co-efficient of Variation**		**67.6889**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.9



The return on sales of NMCTH is range between (0.026) to 0.151 and average ratio during the study period is 0.072.Similarly, this ratio of KMCTH is range between 0.015 to 0.139 and average ratio during the research period is also 0.072.It shows the

contribution of Net Income on Total Income is equal in both the NMCTH and KMCTH during the study period.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 67.68% < 100.75%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.3.4 Return on Equity

The return on shareholders equity indicates how the firm will has used the resources of the owners. This ratio will reveal the relative performance investment. Higher the ratio is preferable the ratio is calculated by dividing the Net profit after tax by shareholder's equity i.e preference shareholder's equity plus common shareholder's equity.

Return on Equity = Net profit after tax
Equity Capital

Table 4.10

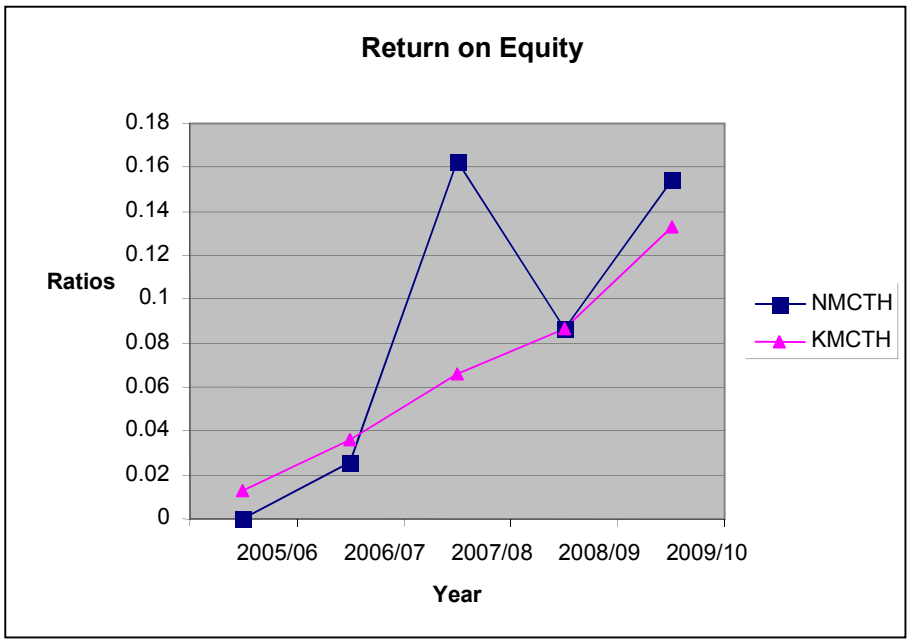
Rs (in '000)

Return on Equity

Fiscal Year	**NMCTH**			**KMCTH**		
	Earning after tax	**Shareholders equity**	**Ratios**	**Earning after tax**	**Shareholder Equity**	**Ratio**
2005/06	(3120.30)	123587.40	-0.02525	1246.10	37856.40	0.013
2006/07	3429.50	130313.70	0.026	3610.18	101352.40	0.036
2007/08	21850.60	123504.10	0.163	5586.50	84578.60	0.066
2008/09	11904.40	136937.10	0.087	3780.20	112243.20	0.087
2009/10	19888.30	129504.20	0.154	16352.30	122640.60	0.133
Mean			**0.080**	**Mean**		**0.067**
Standard Deviation			**0.081244**	**Standard Deviation**		**0.04645**
Co-efficient of Variation			**93.38428**	**Co-efficient of Variation**		**69.3427**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.10



The return on equity of NMCTH is range between 0.026 to 0.169 and average ratio during the period is 0.087, in times. Similarly this ratio of KMCTH is range between 0.013and average ratios during the review period is 0.067, in times. The average ratio of NMCTH is greater than KMCTH by 0.02.This indicates that the investment of shareholders on NMCTH is more profitable than KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 69.34 % < 93.38%.It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.3.5 Expenses Ratio

The expenses ratio indicates the level of expenses in term of direct as well as indirect expenses the expenses under the study covered, college expenses, hospital expenses, office expenses general expenses as well as different revenue expenses written off. Lower the expenses ratio is better for the firm which indicates the profitability of the firm through the low level of expenses on sales. This ratio is calculated by dividing by total expenses by total sales:

Expenses Ratio = Various Expenses

Total Sales

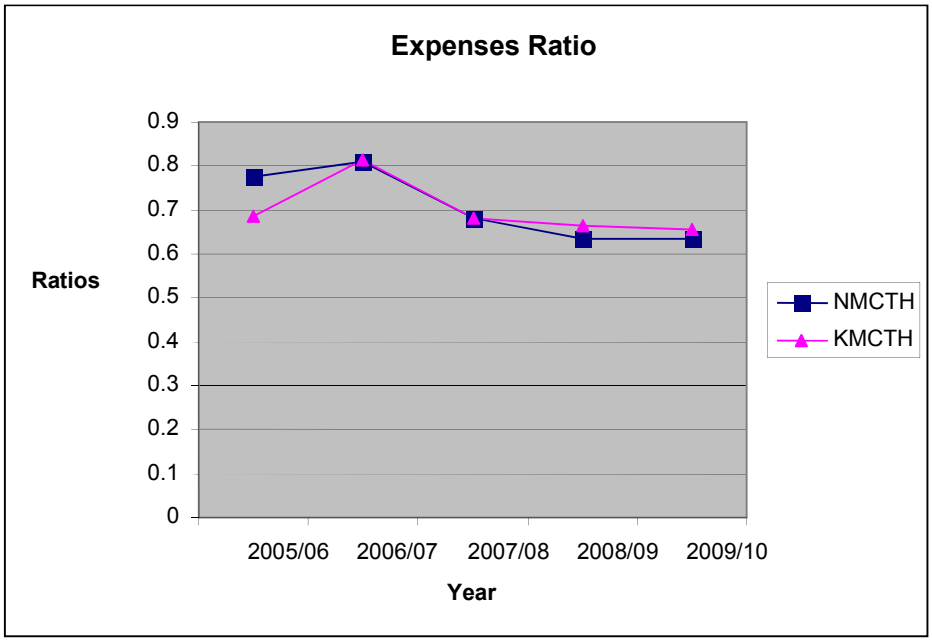
Table 4.11

Expenses Ratio **Rs (in '000)**

Fiscal Year	NMCTH			KMCTH		
	Total Expenses	Sales	Ratios	Total Expenses	Sales	Ratio
2005/06	94646.70	122290.40	0.774	64528.40	94288.50	0.684
2006/07	121281.20	149996.40	0.809	79402.10	97496.20	0.814
2007/08	113438.50	166059.20	0.683	69689.60	102348.50	0.681
2008/09	108562.60	170992.20	0.635	74128.70	10146.20	0.665
2009/10	114229.20	110400.10	0.633	88276.50	134799.80	0.655
Mean			**0.707**	**Mean**		**0.700**
Standard Deviation			**0.08082**	**Standard Deviation**		**0.06492**
Co-efficient of Variation			**11.43168**	**Co-efficient of Variation**		**69.34277**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.11



The expenses ratio of NMCTH is range between 0.633 to 0.809 and average ratio during the research period is 0.700, in times. The average ratio of KMCTH is greater than KMCTH by 0.007.This indicates that KMCTH has slightly low expenses than NMCTH but both have high expenses ratio.

Likewise, the co-efficient variation between the ratios of NMCTH is less than KMCTH, i.e. 11.43% < 69.34%. It indicates that the variability of ratio of NMCTH is more uniform than KMCTH.

Overall Sales and Profitability Performance of NMCTH and KMCTH

Sales and Profitability ratio show the forms effectiveness to utilize the available resources. There is a considerable relationship between sales and profit. Generally higher the sales generate higher the profit. No firm can exist without profit in Long-term. In the above analysis the gross margin ratio of KMCTH is using its resources efficiently than of NMCTH. The average return on assets and return on equity both have more in KMCTH than of NMCTH The return on assets also indicates the effectiveness of utilization of assets on KMCTH is slightly better than of NMCTH but both the hospitals are not utilizing theirs assets effectively which is shown by the lower return on assets ratio. Similarly, higher return on KMCTH o utilizing the shareholders fund well than of NMCTH. Both the hospitals have poor return on equity and which doesn't attract the shareholder's fund well than of NMCTH. Both the hospitals have poor return on equity and which does not attract the shareholders. The hospitals have equal return on sales and expenses ratio. These ratios indicate there is no significant difference in the total expenses made by two hospitals. Both NMCTH and KMCTH have poor sales and profitability performance but KMCTH is slightly better than NMCTH in this performance.

4.1.4 Efficiency Ratio

Efficiency ratio provides the information that have efficiently the firm is using its assets to generate the sales or profitability or firm is using its assets to generate the sales or profitability or this ratio shows that how well the assets of a firm has been managed. The success of a firm also depends on the management of the assets. o, to

earn the valuable information about the assets management for taking the corrective action in future to drive the firm's value towards the prosperity the analysis of efficiency performance is very important both on service and manufacturing organization.

The ratios under the efficiency performance are analyzed as follows:-

4.1.4.1 Inventory Turnover Ratio

Turnover ratios are also known as activity ratios. The inventory turnover ratio indicates the speed with assets are being converted or turned over into sales. These ratios thus involve a relationship between assets and sales. The proper balance between sales and assets reflects that assets are managed well. A higher he ratio implies the firm is more efficient in managing inventories by minimizing the investment in inventories. The ratio is calculated by dividing the cost of good sold by average inventory.

Inventory Turnover Ratio (ITR) = Cost of Good Sold (CGS)

Average Inventory

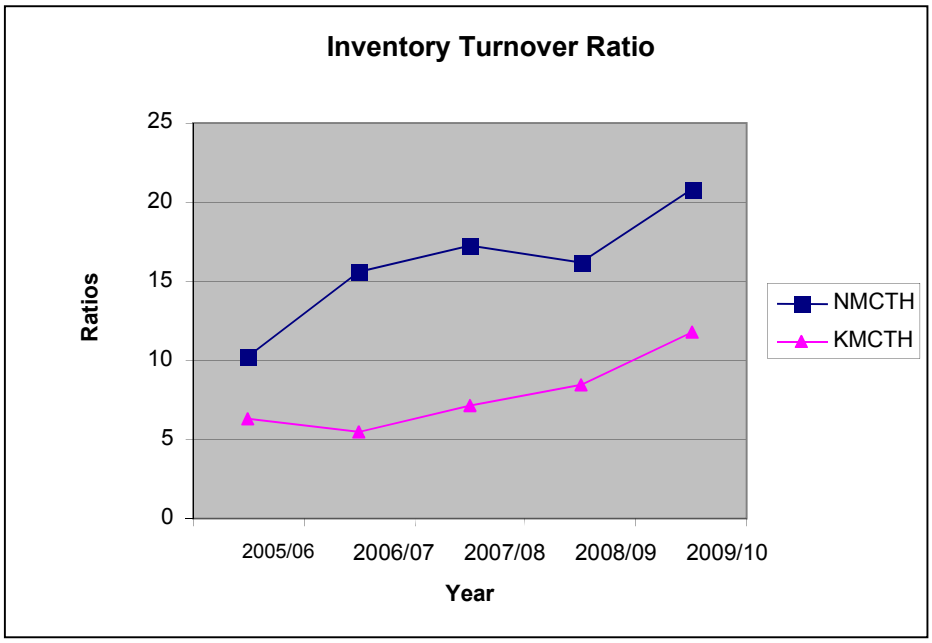
Table 4.12

Inventory Turnover Ratio **Rs (in '000)**

Fiscal Year	NMCTH			KMCTH		
	Cost of goods sold	Average Inventory	Ratios	Cost of Good Sold	Average Inventory	Ratio
2005/06	60924.80	5919.40	10.29	38034.20	6038.50	6.29
2006/07	81106.30	5187.20	15.64	33129.80	6057.40	5.47
2007/08	84699.90	4892.80	17.31	30764.20	4314.70	7.13
2008/09	80105.90	4936.80	16.23	31910.60	3772.70	8.46
2009/10	84170.10	4031.30	20.88	51535.80	4391.70	11.74
Mean			**16.07**	**Mean**		**7.89**
Standard Deviation			**3.8174**	**Standard Deviation**		**2.4553**
Co-efficient of Variation			**23.755317**	**Co-efficient of Variation**		**31.1200**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.12



The inventory turnover ratio of NMCTH is range between 10.29 to 20.88 and average ratio during the study period is 16.07, in times .Similarly this ratio of KMCTH is range between 6.29 to 11.74 and average ratio during the r review period is 7.89, in times .Average ITR of NMCTH is more than KMCTH by 8.18.This indicates that the inventory of NMCTH is quickly turned over to generate sales than KMCTH.

Likewise, the co-efficient variation between the ratios of NMCTH is less than KMCTH, i.e. 23.75 % < 31.12%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.4.2 Days in Inventory Holding (DIH)

Days of Inventory holding (DIH) indicates the holding period of finish goods by the industry. In the other words the ratio shows how quickly the manufactures product is sold off. Generally lower the holding period. Higher will be the ITR indicated that the better using of the inventory by a firm So, ITR and DIH are related to each/other. This ratio is calculated by dividing Days in a year by Inventory Turnover Ratios (ITR).

$$\textbf{Days in Inventory Holding} = \frac{\textbf{Days in a Year}}{\textbf{ITR}}$$

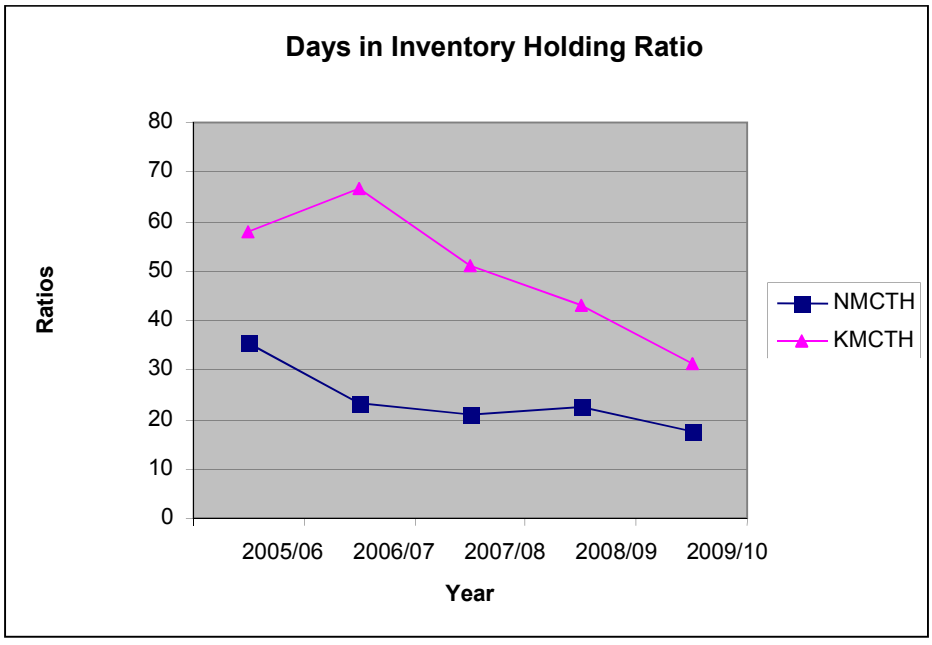
Table 4.13

Days in Inventory Holding Ratio **Rs (in '000)**

Fiscal Year	NMCTH			KMCTH		
	Cost of goods sold	Average Inventory	Ratios	Cost of Good Sold	Average Inventory	Ratio
2005/06	365	10.29	35.47	365	6.29	58.03
2006/07	365	15.64	23.34	365	5.47	66.73
2007/08	365	17.31	21.08	365	7.13	51.19
2008/09	365	16.23	22.49	365	8.46	43.14
2009/10	365	20.88	17.48	365	11.74	31.09
Mean			**23.97**	**Mean**		**50.04**
Standard Deviation			**6.8064**	**Standard Deviation**		**13.6969**
Co-efficient of Variation			**28.39**	**Co-efficient of Variation**		**27.3721**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.13



The days in Inventory of NMCTH are range between 17.48 to 35.47 and average ratio during the study period is 23.97, in days. Similarly, this ratio of KMCTH is range between 0.42 to 0.51 and average ratio during the review period is 50.04, in days.

Average ratio of NMCTH is less than KMCTH. So, NMCTH has been turning over its inventory to sales fastly than of KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 27.37% < 28.39%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.4.3 Total Assets Turnover Ratio

The assets turnover ratio shows that the firms ability to utilize its assets to generate the level of sales. Therefore, more the ratio is better the firm is performing. In the other words ratio is better than the firm is performing in the other words the ratio shows how much sales the firm is generating for every dollar of investment in assets.

Total Assets Turnover Ratio = Sales

Total Sales

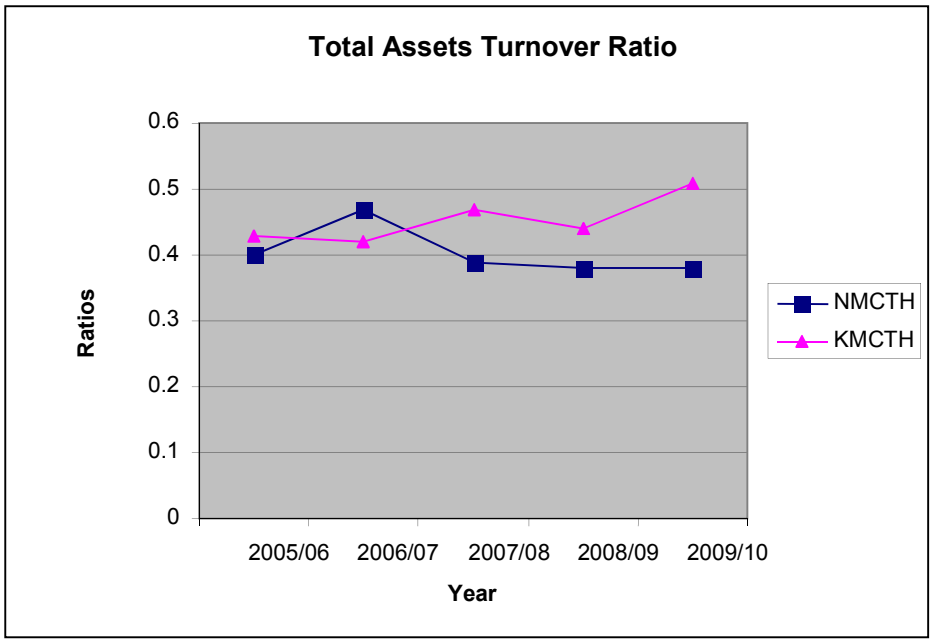
Table 4.14

Total Assets Turnover Ratio **Rs (in '000)**

Fiscal Year	**NMCTH**			**KMCTH**		
	Sales	**Total Assets**	**Ratios**	**Sales**	**Total Assets**	**Ratio**
2005/06	122290.40	307197.40	0.40	94288.50	22104.70	0.43
2006/07	149996.40	321442.20	0.47	97496.20	233954.40	0.42
2007/08	166059.20	425378.70	0.39	102348.50	218902.0	0.47
2008/09	170992.20	455079.0	0.38	111406.20	251137.20	0.44
2009/10	180400.10	477593.0	0.38	134799.80	264219.20	0.51
Mean			**0.40**	**Mean**		**0.45**
Standard Deviation			**0.0378**	**Standard Deviation**		**0.0364**
Co-efficient of Variation			**9.4538**	**Co-efficient of Variation**		**8.1042**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.14



The Total Assets turnover ratio of NMCTH is range between 0.38 to 0.47 and average ratio during the study period is 0.40, in times. Similarly this ratio of KMCTH is range between 0.42 to 0.51 and average ratio during the review period is 0.45, in times. Here average Total Assets Turnover Ratio of KMC This more than NMCTH. This indicates that KMCTH has been generating high amount of sales than NMCTH, in every rupee amount of Investment.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 8.10% < 9.45%.It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

4.1.4.4 Average Collection Period

The average collection period measures the collection of the firm either rapidly or the slowence. In the other words the ratio shows the firm's efficiency in collecting cash from its credit sale. The shorten collection period is better for the quality of he debtor, it could also mean that the firm is very strict in its credit policy, which may not attract customer. This ratio is calculated by dividing the average account receivable by daily sales.

Average Collection Period = Average Accounts Receivable

Daily Sales

Table 4.15

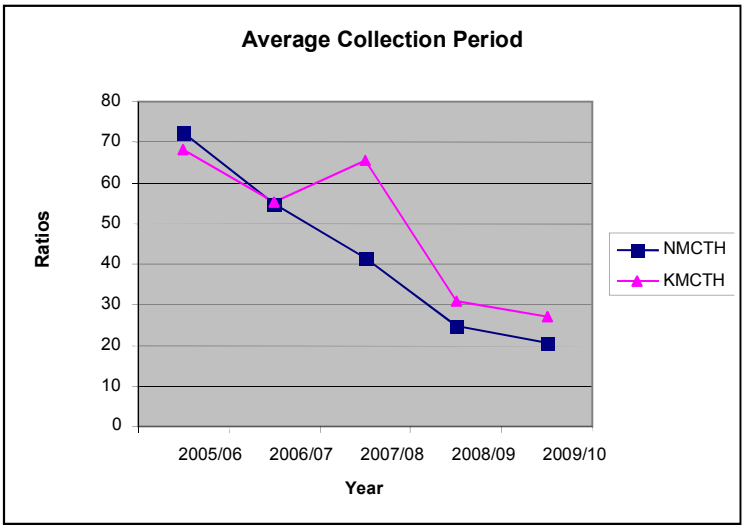
Rs (in '000)

Average Collection Period

Fiscal Year	NMCTH			KMCTH		
	Average Account Receivable	Daily Sales	Ratios	Average Account Receivable	Daily Sales	Ratio
2005/06	25661.0	355.04	72.28	17578.30	258.32	68.05
2006/07	22468.40	410.95	54.67	14798.60	267.11	55.40
2007/08	18933.80	454.96	41.62	18423.20	280.41	65.70
2008/09	11571.60	468.47	24.70	9427.40	305.22	30.89
2009/10	10206.60	494.25	20.65	9934.80	369.31	26.90
Mean			**42.78**	**Mean**		**49.39**
Standard Deviation			**21.38**	**Standard Deviation**		**19.3544**
Co-efficient of Variation			**49.9926**	**Co-efficient of Variation**		**39.1870**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.15



The average collection period of NMCTH is range between 20.65 to 72.28 and average ratio during the study period is 42.78, in days. Similarly this ratio of KMCTH is range between 26.90 to 68.05 and average ratio during the research period is 49.39, in days. Average Collection period of NMCTH is less than KMCTH. This indicates that NMCTH is efficient to collect cash from its credit sales than of KMCTH.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 39.18% < 49.99%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

Overall Efficiency – Performance of NMCTH and KMCTH

The ratio shows that how well the firm's assets are being managed. In the above analysis the average Inventory turnover ratio and Days in inventories of NMCTH are 16.07 and 23.97.This indicates Rs 16070 of inventories of NMCTH is sold in 24 days. Similarly. These ratios of KMCTH are 7.39 and 50.04.This indicates Rs 7890 of Inventories are turned over at a time and average inventory of KMCTH is sold in 50.4 days. Therefore NMCTH is more efficient in the management of Inventory. Total Assets Turnover Ratio of KMCTH is more than of NMCTH indicates the effective utilization of assets to generate the sales in KMCTH than of NMCTH.Average Collection period of NMCTH is also less than KMCTH which indicates the efficiency of NMCTH in cash collection of credit sales. Both the organization has normal efficiency performance but NMCTH is slightly better than KMCTH.

4.1.5 Value Ratios

Values ratio plays an important role to assure the investment opportunities in all types of organizations. These ratios show the "embedded value" in stocks and are used by the investors as a screening device before making their investment. When the markets are bullish or if the investor's sentiment is optimistic about a particular stock, the EPS and CPS will tend to high indicating and increasing trend that investors are willing to pay a high price for company's earnings. The ratios analyzed under the value performance are:

4.1.5.1 Earning per share (EPS)

Investors contemplating to invest in a hospital would be taken to know the investment profitability of hospital. Before taking financial decision, analysis of earning per share is inevitable for a rational investor to confirm and confident on return for his expectation. This ratio is calculated by dividing Net Profit after tax by the number of share outstanding when the company wouldn't pay dividend to their shareholders.

Earning Per Share (EPS) = **Net Profit after Tax**
No of share outstanding

Table 4.16

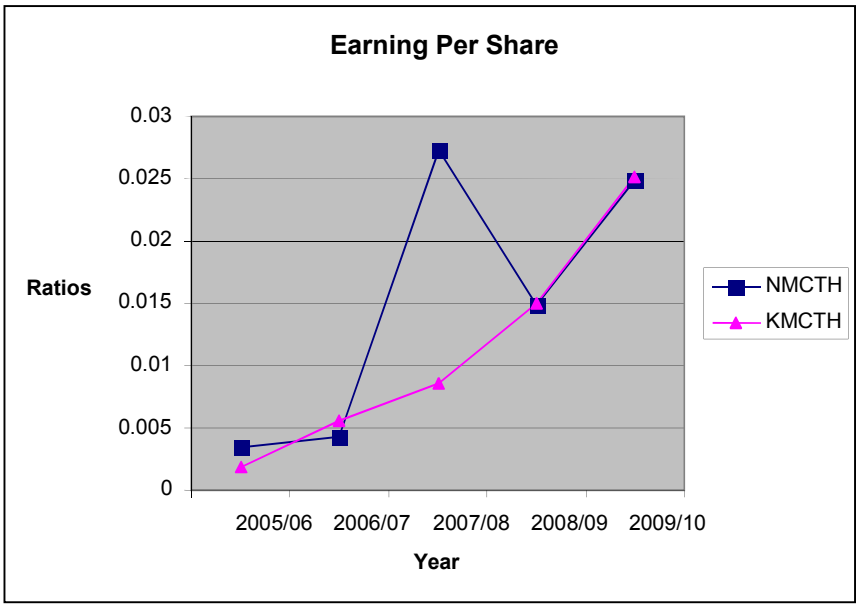
Earning Per Share

Rs (in '000)

Fiscal Year	**NMCTH**			**KMCTH**		
	Earning After Tax	**No. of Share Outstanding**	**Ratios**	**Earning After Tax**	**No of Share Outstanding**	**Ratios**
2005/06	3120.30	900000	0.003467	1246.10	650000	0.001917
2006/07	3429.50	800000	0.004287	3610.18	650000	0.005554
2007/08	21850.60	800000	0.027313	5586.50	650000	0.008595
2008/09	11904.50	800000	0.014881	9780.20	650000	0.01505
2009/10	19888.30	800000	0.024860	16352.30	650000	0.025157
Mean			**0.01496**	**Mean**		**0.01125**
Standard Deviation			**0.0111**	**Standard Deviation**		**0.0091**
Co-efficient of Variation			**74.4814**	**Co-efficient of Variation**		**81.24**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.16



The earning per share of NMCTH is range between 0.003467 to 0.027313 and average ratio during the study period is 0.01496, in times. Similarly, this ratio of KMCTH is range between 0.001917 to 0.025157 and average ratio during the research period is 0.01137, in times. The average EPS of NMCTH is slightly better than KMCTH. This indicates an investor invests his fund on KMCTH when they are mutually exclusive hospitals.

Likewise, the co-efficient variation between the ratios of NMCTH is less than KMCTH, i.e. 81.24% < 74.48%. It indicates that the variability of ratio of NMCTH is more uniform than KMCTH

4.1.5.2 Dividend Yield

The dividend yield ratio indicates the return that investors are obtaining on their investment in the form of dividends. This yield is usually fairly low as the investors are also receiving capital growth on their investment in the form of an increased share price. It is interesting to note that there is strong correlation between dividend yields and market prices. Invariably, the higher the dividend, the higher the market value of the share. The dividend yield ratio compares the dividend per share against the price of the share and is calculated as

Note: - Dividend Yield of both hospitals ratio couldn't be calculated because of the company can't pay dividend to the shareholders.

4.1.5.3 Cash Flow per Share

Cash flow per share also indicates the investment potentiality of the potential investments on hospitals. Cash per Share gives the information about the hospitals, either there are various opportunities to invest and to take advantages from the environment through the availability of the fund or not, which is calculated by dividing Net Cash Flow by No of Share Outstanding.

Cash per Share = **Net Cash Flow** / **No of share Outstanding**

Table 4.17

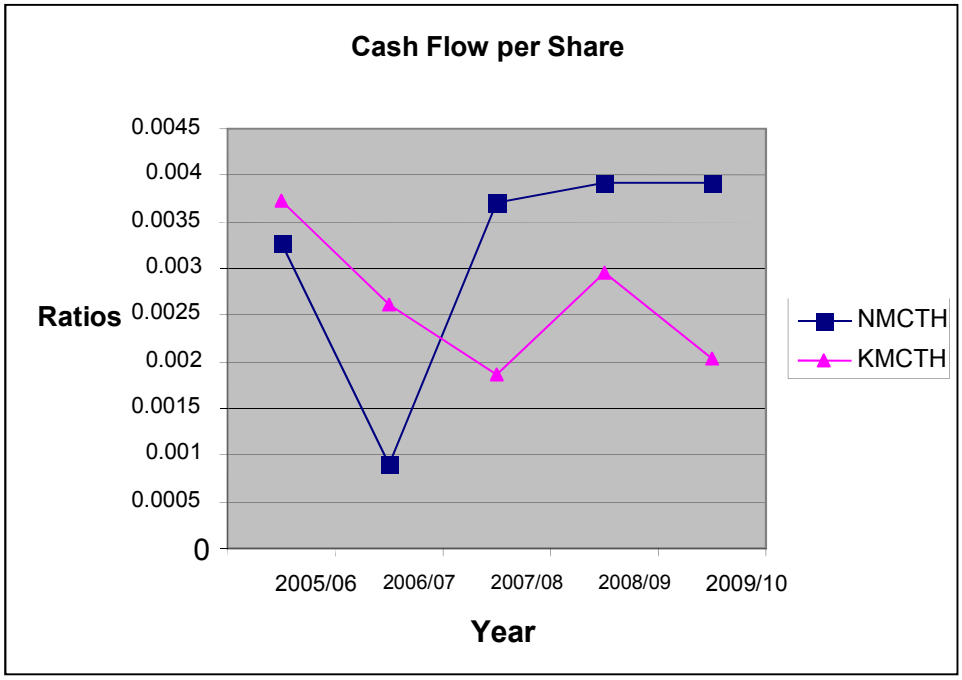
Rs (in '000)

Cash Flow per Share

Fiscal Year	**NMCTH**			**KMCTH**		
	Net Cash Flow	**No of Share Outstanding**	**Ratios**	**Net Cash Flows**	**No of Share Outstanding**	**Ratios**
2005/06	2955.60	9,00,000	0.003284	2422.40	650000	0.003727
2006/07	713.90	8,00,000	0.000892	1702.10	650000	0.002619
2007/08	2962.20	8,00,000	0.003702	1214.80	650000	0.001869
2008/09	3133.10	8,00,000	0.003916	1927.60	650000	0.002966
2009/10	1098.50	8,00,000	0.003916	1318.50	650000	0.002028
Mean			**0.0026334**	**Mean**		**0.002500**
Standard Deviation			**0.0012**	**Standard Deviation**		**0.0007**
Co-efficient of Variation			**48.7574**	**Co-efficient of Variation**		**28.4032**

(Source: Annual Report of NMCTH and KMCTH,2005/06-2009/10)

Figure 4.17



The cash flow per share of NMCTH is range between 0.000892 and 0.003916 and average cashflow per share is 0.0026334, in times. Similarly this ratio of KMCTH is range between 0.001869 and 0.003727 and average ratio during the research period is 0.0026418. This ratio of KMCTH is slightly higher than NMCTH. This indicates that investment opportunities are lower than the KMCTH others such opportunities, on the other hand due to the lower earning per share.

Likewise, the co-efficient variation between the ratios of KMCTH is less than NMCTH, i.e. 28.40% < 48.70%. It indicates that the variability of ratio of KMCTH is more uniform than NMCTH

Overall Value Performance of NMCTH and KMCTH

The value ratio indicates the value of firm for each shareholder. So, higher the value performance is better for the firms. In the above analysis earnings per share of NMCTH is higher but cashflow per share is lower than KMCTH. This indicates that the earning for a piece of shares on NMCTH is higher but vice-versa. Due to the low level of fund availability on NMCTH it may lost market opportunity is lower than KMCTH and vice-versa. Due to the low level of fund availability on NMCTH it may

lose market opportunities, employment opportunities and others such opportunities. On the other hand due to the lower earning per share the investors may not attract on KMCTH. So, both the hospitals should correct their default sectors. In overall the value of both hospitals are worse and the hospitals are not performing a considerable value because there is very low average earning per share as well as cash flow per share.

4.2 Secondary Data Analysis by Using T-Test

4.2.1 T- Test of Current Assets to Current Liabilities Ratio

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of current assets to current liabilities.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of current assets to current liabilities

Table 4.18

T-Test of Current Assets and Current Liabilities

Hospital	Mean Values	Test Statistics
NMCTH	**0.62**	
KMCTH	**0.51**	**| t | 0.281**

Decision

Since the calculated value of |t| (=0.281) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their current assets to current Liabilities.

4.2.1.1 T- Test of Quick Assets to Current Liabilities Ratio

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of quick assets to current liabilities.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of quick assets to current liabilities

Table 4.19

T Test of Quick Assets to Current Liabilities

Hospital	Mean Values	Test Statistics
NMCTH	**0.56**	
KMCTH	**0.44**	**| t | = 0.122**

Decision

Since the calculated value of |t| (=0.123) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their quick assets to current liablities.

4.2.1.2 T- Test of Total Debt to Total Equity Ratio

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of total debt to total equity ratio.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of total debt to total equity ratio.

Table 4.20

T Test of Total Debt to Total Equity Ratio

Hospital	Mean Values	Test Statistics
NMCTH	**2.05**	
KMCTH	**1.37**	**| t | =0.636**

Decision

Since the calculated value of |t| (=1.76) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their current assets to current Liablities..

4.2.1.3 T- Test of Total Debt to Total Assets

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of total debt to total assets

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of total debt to total assets.

Table 4.21

T-Test of Total Debt to Total Assets

Hospital	Mean Values	Test Statistics
NMCTH	**0.66**	**| t | = 0.246**
KMCTH	**0.57**	

Decision

Since the calculated value of |t| (=0.246) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their current assets to current Liablities..

4.2.1.4 T- Test of Operating Profit to Interest Expenses

Null Hypothesis (Ho) : M1=M2 i.e, there is no significant difference between mean value of operating profit to interest expenses.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of operating profit to interest expenses.

Table 4.22

T Test of Operating Profit to Interest Expenses

Hospital	Mean Values	Test Statistics
NMCTH	**1.62**	**| t | = 0.207**
KMCTH	**1.74**	

Decision

Since the calculated value of |t| (=0.207) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their operating profit to interest expenses.

4.2.1.5 T- Test of Net Cash Flow to Interest Expenses

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of cash flow to interest expenses.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of cash flow to interest expenses.

Table 4.23

T test of Net Cash Flow to Interest Expenses

Hospital	Mean Values	Test Statistics
NMCTH	0.065		t	= 0.249
KMCTH	0.073	

Decision

Since the calculated value of |t| (=0.249) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their net cash flow to interest expenses.

4.2.1.6 T- Test of Gross Profit to Total Income Ratio

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of gross profit to total income.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of gross profit to total income.

Table 4.24

T-Test of Gross Profit to Total Income Ratio.

Hospital	Mean Values	Test Statistics
NMCTH	**0.50**	
KMCTH	**0.66**	**| t | = 0.436**

Decision

Since the calculated value of | t | (=0.436) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their gross profit to total income ratio.

4.2.1.7 T- Test of Net Income to Total Assets

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of net income to total assets.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of net income to total assets.

Table 4.25

T-Test of Net Income to Total Assets

Hospital	Mean Values	Test Statistics
NMCTH	**0.028**	
KMCTH	**0.034**	**| t | = 0.659**

Decision

Since the calculated value of | t | (=0.659) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their Net Income to Total Assets.

4.2.1.8 T- Test of Net Income to Total Income

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of net income to total income.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of net income to total income.

Table 4.26

T-test of Net Income to Total Income

Hospital	Mean Values	Test Statistics
NMCTH	**0.072**	**| t | = 0.067**
KMCTH	**0.072**	

Decision

Since the calculated value of | t | (=0.067) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their Net Income to Total Income.

4.2.1.9 T- Test of Earning after Tax to Shareholders Equity

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of earning after tax to shareholders equity.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of earning after tax to shareholders equity.

Table 4.27

T-test of Earning after tax to shareholders equity

Hospital	Mean Values	Test Statistics
NMCTH	**0.087**	**| t | = 0.201**
KMCTH	**0.067**	

Decision

Since the calculated value of | t | (=0.201) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their Earning after tax to shareholders equity.

4.2.1.10 T- Test of Total Expenses to Sales

Null Hypothesis (Ho):M1=M2 i.e, there is no significant difference between mean value of total expenses to sales.

Alternative Hypothesis (H1):M1≠M2 i.e, there is significant difference between mean value of total expenses to sales.

Table 4.28

T-test of Total Expenses to Sales

Hospital	Mean Values	Test Statistics
NMCTH	**0.707**	**| t | = 0.0166**
KMCTH	**0.700**	

Decision

Since the calculated value of | t | (=0.0166) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their total expenses to sales.

4.2.1.11 T-test of Cost of Goods Sold to Average Inventory

Null Hypothesis (Ho) : M1=M2 i.e, there is no significant difference between mean value of cost of goods sold to average inventory.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of cost of goods sold to average inventory.

Table 4.29

T-test of Cost of goods sold to Average Inventory.

Hospital	Mean Values	Test Statistics
NMCTH	**16.07**	
KMCTH	**7.89**	**| t | = 1.201**

Decision

Since the calculated value of | t | (=1.201) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their cost of goods sold and average Inventory.

4.2.1.12 T- Test of Sales to Average Inventory

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of sales to average inventory.

Alternative Hypothesis (H1):M1≠M2 i.e, there is significant difference between mean value of sales to average inventory.

Table 4.30

T-test of Sales to Average Inventory

Hospital	Mean Values	Test Statistics
NMCTH	**23.97**	
KMCTH	**50.04**	**| t | = 1.091**

Decision

Since the calculated value of | t | (=1.091) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e there is not significant difference between the mean values of NMCTH and KMCTH regarding their Sales to Average Inventory.

4.2.1.13 T- Test of Sales to Total Assets.

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of sales to total assets.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of current assets to current liabilities

Table 4.31

T-test of Sales to Total Assets

Hospital	Mean Values	Test Statistics
NMCTH	**0.40**	
KMCTH	**0.45**	**| t | = 0.151**

Decision

Since the calculated value of | t | (=0.151) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e. there is not significant difference between the mean values of NMCTH and KMCTH regarding sales to total assets.

4.2.1.14 T- Test of Average Account Receivable to Daily Sales.

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of average account receivable to daily sales.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of average account receivable to daily sales.

Table 4.32

T - Test of Average Account Receivable to Daily Sales

Hospital	Mean Values	Test Statistics
NMCTH	**42.78**	
KMCTH	**49.39**	**| t | = 0.235**

Decision

Since the calculated value of | t | (=0.235) is less than tabulated value at 5% Level of significant for 8 d.f (= 2.31).The null hypothesis is accepted i.e. there is not significant difference between the mean values of NMCTH and KMCTH regarding Average Account Receivable to Daily Sales.

4.2.1.15 T- test Earning After Tax to number of Share Outstanding

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of average account receivable to daily sales.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of average account receivable to daily sales.

Table 4.33

T- Test of Earning after tax to No. of share Outstanding

Hospital	Mean Values	Test Statistics
NMCTH	**0.015**	
KMCTH	**0.012**	**| t | = 1.125**

Decision

Since the calculated value of |t| (=1.125) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their current assets to current Liablities..

4.2.1.16 T- Test of Cash Flow Per Share

Null Hypothesis (Ho): M1=M2 i.e, there is no significant difference between mean value of Cash Flow per share.

Alternative Hypothesis (H1): M1≠M2 i.e, there is significant difference between mean value of Cash Flow per Share.

Table 4.34

T- Test of Cash Flow per Share

Hospital	Mean Values	Test Statistics
NMCTH	0.0024	
KMCTH	0.0026	| t | = 1.09

Decision

Since the calculated value of |t| (=1.76) is less than tabulated value at 5% level of significant for 8.d.f (=2.31) The Null hypothesis is accepted, i.e There is no significant difference between the mean values of NMCTH and KMCTH regarding their current assets to current Liablities.

4.2.2 Karl Pearson's Coefficient of Correlation

It is most widely used statistical tools, which measures the significance of the relationship between two variables during the study period.

The formula for computing Karl Pearson's coefficient of correlation is as follows:

$$\mathbf{R=}\ \frac{N\sum xy-\sum x.\sum y}{\sqrt{N\sum x^2-(\sum X)^2}-\sqrt{N\sum y^2-(\sum Y)^2}}$$

The Value of Co-efficient correlation as obtained by the above formula, should always lie between +1 and -1 when r=+1, it denotes the perfect positive correlation between the two variables, r= -1 denotes there s a negative correlation between the variables.

Under this topic, Karl Pearson's co-efficient of correlation has been used to find out the relationship between Total Assets to Net Income, Interest Expenses to Operating profit, Total expenses to Net Income, Sales to Net Income.

4.2.1.1 Total Assets and Net Income

Table 4.35

Correlation between Total Assets and Net Income

Hospitals	(r)	(r^2)	P.E (r)	6. P. E (r)
NMCTH	0.6490	0.4202	0.1745	1.4070
KMCTH	0.9080	0.8244	0.0529	0.3177

From the above table in case of NMCTH, it is found that co-efficient of relation between Total Assets and Net Income is 0.6490.It shows positive correlation between these two variables. Moreover, when we consider the value of co-efficient of determination (r^2), which is 0.4202 and it means 42.02 % of the variation in the variation in the dependent variable (Net Income) has been explained by the independent Variable (Total Assets).Similarly considering the value of 'r' is i.e 0.6490 and comparing it with 6P.E.r, i.e 0.4070, we can find that 'r' is highly greater than the value of 6.P.Er which reveals that the value of 'r' is significant. In other words, there is significant relationship between Total Assets and Net Income of NMCTH.

Likewise, In the case of the KMCTH, the Karl persons co-efficient of correlation between Total Assets and Net Income 0.9080.It shows positive correlation between these two variables. Moreover, when we consider the value of co-efficient of determination (r^2), which is 0.8244 and it means 82.44 % of the variation in the variation in the dependent variable (Net Income) has been explained by the independent Variable (Total Assets).Similarly considering the value of 'r' is i.e 0.9080 and comparing it with 6P.E.r, i.e 0.3177, we can find that 'r' is less than the value of 6.P.Er which reveals that the value of 'r' is insignificant. In other words, there is insignificant relationship between Total Assets and Net Income of KMCTH.

Lastly we can draw a conclusion from the above analysis that in NMCTH and KMCTH there is positive correlation between Total Assets and Net Income the relationship is significant and the value of 'r^2' shows highly significant. This indicates that NMCTH and KMCTH are successful to mobilize their Total Assets.

4.2.1.2 Interest Expenses to Operating Profit

Table 4.36

Correlation between Interest Expenses to Operating Profit

Hospitals	(r)	(r^2)	P.E (r)	6. P. E (r)
NMCTH	0.8505	0.72250	0.8837	0.5022
KMCTH	0.9267	0.85747	0.4301	0.2580

It is calculated to examine the relationship between Interest Expenses between operating profits of KMCTH and NMCTH. The main objective of calculating co-efficient of correlation is to test whether the Operating Profit is significant in paying Interest expenses or not. This analysis should be helpful for NMCTH and KMCTH to take corrective actions on the capital structure decision.

From the above Table, In case of NMCTH, it is found that coefficient of relation between Interest Expenses to Operating Profit is 0.8505 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.8370 and it means the value of 83.37% of the variation in the dependent variable (operating profit) has been explained by the independent variable (Interest Expenses).Similarly Considering the value of 'r' is i.e.0.8505 and comparing it with 6.P.Er., we can find that 'r' is greater than the value of 6.P.Er. Which reveals that the value of 'r' is significant? In other words there is significant relationship between Interest Expenses to operating profit.

From the above Table, In case of KMCTH, it is found that coefficient of relation between Interest Expenses to Operating Profit is 0.9267 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.4301 and it means the value of 43.01% of the variation in the dependent variable (operating profit) has been explained by the independent variable (Interest Expenses).Similarly Considering the value of 'r' is i.e.0.9267 and comparing it with 6.P.Er., we can find that 'r' is greater than the value of 6.P.Er. Which reveals that the value of 'r' is significant? In other words there is significant relationship between Interest Expenses to operating profit.

4.2.1.3 Total Expenses to Net Income

Table 4.37

Correlation between Total Expenses to Net Income

Hospitals	(r)	(r^2)	P.E (r)	6. P. E (r)
NMCTH	0.2799	0.7780	0.1244	0.7464
KMCTH	0.3487	0.1211	0.2651	0.5907

From the above Table, In case of NMCTH, it is found that coefficient of relation between Total Expenses to Net Income is 0.2799 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.7780 and it means the value of 77.80% of the variation in the dependent variable (Net Income) has been explained by the independent variable (Total Expenses).Similarly Considering the value of 'r' is i.e.0.7464 and comparing it with 6.P.Er., we can find that 'r' is greater than the value of 6.P.Er. Which reveals that the value of 'r' is significant? In other words there is significant relationship between Interest Expenses to operating profit.

From the above Table, In case of KMCTH, it is found that coefficient of relation between Total Expenses to Net Income is 0.7464 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.7780 and it means the value of 77.80% of the variation in the dependent variable (Net Income) has been explained by the independent variable (Total Expenses).Similarly Considering the value of 'r' is i.e.0.3487 and comparing it with 6.P.Er., we can find that 'r' is less than the value of 6.P.Er. This reveals that the value of 'r' is insignificant. In other words there is insignificant relationship between Interest Expenses to operating profit.

4.2.1.4 Sales to Net Income

Table 4.38

Correlation between Sales to Net Income

Hospitals	(r)	(r^2)	P.E (r)	6. P. E (r)
NMCTH	0.8850	0.7832	0.02924	0.1754
KMCTH	0.9980	0.9960	0.00120	0.00723

It is calculated to examine the relationship between Interest Expenses between operating profits of KMCTH and NMCTH. The main objective of calculating co-efficient of correlation is to test whether the Operating Profit is significant in paying Interest expenses or not. This analysis should be helpful for NMCTH and KMCTH to take corrective actions on the capital structure decision.

From the above Table, In case of NMCTH, it is found that coefficient of relation between Sales to Net Income is 0.8850 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.7832 and it means the value of 78.32% of the variation in the dependent variable (Net Income) has been explained by the independent variable (Sales).Similarly Considering the value of 'r' is i.e.0.7832 and comparing it with 6.P.Er., we can find that 'r' is greater than the value of 6.P.Er. Which reveals that the value of 'r' is significant? In other words there is significant relationship between Interest Expenses to operating profit.

From the above Table, In case of KMCTH, it is found that coefficient of relation between Sales to Net Income is 0.9980 it shows positive relationship between these two variables, moreever , when we consider the value of co-efficient of determination (r^2) which is 0.0.9960 and it means the value of 99.60% of the variation in the dependent variable (Net Income) has been explained by the independent variable (Sales).Similarly Considering the value of 'r' is i.e.0.9980 and comparing it with 6.P.Er., we can find that 'r' is greater than the value of 6.P.Er. Which reveals that the value of 'r' is significant? In other words there is significant relationship between Interest Expenses to operating profit.

4.3 Analysis of Awareness Environmental Factors, Sources of Capital, Strength of Medical Services Role and Responsibility of Primary Data

It is obvious to test whether the awareness to establishing hospital in a country like Nepal is important for Nepalese people or not. As we know the history of modern practice in Nepal is relatively short period. Nepal was in autocratic regime, which kept strict control over the introduction of modern education and health facilities into the country. It becomes necessary to open health education and medical colleges in Nepal to help Nepalese people. But due to many factors technological, political, it's very difficult to provide better services for the people. The health sector in Nepal has been affected by poor sanitary facilities, malnutrition and lack of adequate health facilities. The high rate of infant mortality, 108 to 144 deaths per 1000. Due to lack of better technology it's very difficult to provide better services.

- Unstable political situation in Nepal right due to which people are
- Weak administrator's action of medical association in Nepal
- Lack of medical services outside Kathmandu valley people health could not improve.
- Mismanagement in Nepalese hospitals
- Faculty position of medical profession is better than previous condition.

The primary data analysis has been classified under the following categories and its calculation has been presented in appendix 4 and primary data questionnaire in appendix 3**.**

4.3.1 Environmental Factors are Favorable to Hospital

The questions related to collection of primary data for the environmental factors as their respective question number are as follows:

1. Political environments are favorable to extend the hospital service in Nepal.
2. Technological environment development is sufficient to provide medical service in Nepal.

11. National leaders are serious to improve quality health service.
13. There is necessary further rules and regulation to the development of hospital.

19. Materials relating to medical services can be produce in Nepal.

Environmental factors really play an important role for establishing medical college and teaching hospital. Environmental factors like materials, technology and quality health services which really have great impact for establishing hospital and college in Nepal.

Table 4.39

Education Vs Environmental factors

Critical Value	**18.30703**
Chi-Square Test Statistic	**7.131941**
***p*-Value**	**0.712933**

Ho =There is no relationship between two attributes i.e two attributes are independent. (Education vs environmental factors).

H1 =There is relationship between two attributes i.e two attributes are dependent. (Education vs environmental factors)

Decision

Since the calculated value of chi-square is less than tabulated value at 5% level of significance for 10 degree of freedom. Hence the null hypothesis is accepted and alternative hypothesis is rejected. So, there is no any association between education vs environmental factors.

Table 4.40

Age vs Environmental factors

Critical Value	**18.30703**
Chi-Square Test Statistic	**18.91565**
***p*-Value**	**0.041347**

Ho =There is no relationship between two attributes i.e two attributes are independent. (Age vs environmental factors).

H1 = There is relationship between two attributes i.e two attributes are dependent. (Age vs environmental factors).

Decision

Since the calculated value of chi-square is greater than tabulated value at 5% level of significance for 10 degree of freedom. Hence the null hypothesis is rejected and alternative hypothesis is accepted. So, there is association between age and environmental factors.

Table No 4.41

Level of Profession Vs Environmental factors

Critical Value	**18.30703**
Chi-Square Test Statistic	**9.245482**
***p*-Value**	**0.508976**

Ho =There is no relationship between two attributes i.e two attributes are independent. (Level of profession vs environmental factors).

H1 =There is relationship between two attributes i.e two attributes are dependent. (Level of profession vs environmental factors)

Results and conclusion

Since, the calculated value of chi-square test is less than its tabulated value at 5% level of significance level for 10 degree of freedom. Hence Null hypothesis is accepted and alternative hypothesis is rejected. So, there is no any association between the level of profession and environmental factors.

4.3.2 Sources of Capital are Favorable to the Medical Services in Nepal

3. Share capital is favorable to the hospital in Nepal.
4. Debt or loan capital is favorable to the medical service in Nepal.
10. Equity and Debt capital is the effective financing in hospital sector.

14 Lack of appropriate capital is the reason of poor technology in Nepalese hospital.

Table 4.42

Education Vs Sources of Capital

Critical Value	**18.30703**
Chi-Square Test Statistic	**9.245482**
***p*-Value**	**0.508976**

Ho =There is no relationship between two attributes i.e two attributes are independent. (Education vs sources of capital).

H1 =There is relationship between two attributes i.e two attributes are dependent. (Education vs sources of capital)

Decision

Since the calculated value of chi-square is less than tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is accepted and alternative hypothesis is rejected .so, there is no association between the sources of capital and education level.

Table 4.43

Education Vs Sources of Capital

Critical Value	**18.30703**
Chi-Square Test Statistic	**17.28159**
***p*-Value**	**0.068361**

Ho =There is no relationship between two attributes i.e two attributes are independent. (Age vs sources of capital).

H1 =There is relationship between two attributes i.e two attributes are dependent. (Age vs sources of capital)

Decision

Since, the calculated value of chi-square is less than its tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is accepted and alternative hypothesis is rejected. So, there is no association between the age and sources of capital

Table 4.44

Level of Profession Vs Sources of Capital

Critical Value	**18.30703**
Chi-Square Test Statistic	**9.245482**
***p*-Value**	**0.508976**

Ho = There is no relationship between two attributes i.e two attributes are independent. (Level of profession vs sources of capital).

H1 = There is relationship between two attributes i.e two attributes are dependent. (Level of profession vs sources of capital).

Results and Conclusion

Since, the calculated value of chi-square is less than tabulated value at 5% level of significance level for 10 degree of freedom. Hence, Null hypothesis is accepted and alternative hypothesis is rejected, so, there is no any association between the sources of capital with level of profession**.**

4.3.3 Strength of Medical services in Nepal

5. Nepalese medical college can produce sound Knowledge Manpower.
6. Position of Hospital is totally good in Nepal.
9. Nepalese medical college can provide modern education.
16. Nepalese medical college can produce every sectors manpower.

Table 4.45

Education Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**9.245482**
***p*-Value**	**0.508976**

Ho = There is no relationship between two attributes i.e two attributes are independent. (Education vs strength of medical services).

H1 = There is relationship between two attributes i.e two attributes are dependent. (Education vs strength of medical services).

Decision

Since, the calculated value of chi-square is less than tabulated value at 5% level of significance for 10 degree of freedom. Hence, the null hypothesis is accepted and alternative hypothesis is rejected .So, there is no any association between the strength of medical services with education level.

Table 4.46

Age Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**18.91565**
***p*-Value**	**0.041347**

Ho = There is no relationship between two attributes i.e two attributes are independent. (Education vs sources of capital).

H1 = There is relationship between two attributes i.e two attributes are dependent. (Education vs sources of capital).

Decision

Since, the calculated value is more than its tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is rejected and alternative hypothesis is accepted. So, there is association between strength of medical services and age.

Table 4.47

Level of Profession Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**9.245482**
***p*-Value**	**0.508976**

Results and Conclusion

Since, the calculated value of the chi-square is less than its tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is accepted. So, there is no any association between the level of profession and strength of medical services.

4.3.4 Role and Responsibility of Medical College to Extend Services

6. Position of Hospital is totally good in Nepal.
7. Are you sure that hospital can provide quality and better services for people of Nepal.

8. To Produced skill manpower hospital should adopt modern education and techniques.

12. Government can facilitate to extend the medical sectors at present.

Table 4.48

Education Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**19.60218**
***p*-Value**	**0.033248**

Decision

Since, the calculated value of chi-square is more than tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is rejected and alternative hypothesis is accepted. So, there is association between education with role and responsibility.

Table 4.49

Age Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**18.91565**
***p*-Value**	**0.041347**

Decision

Since, the calculated value of chi-square is more than tabulated value at 5% level of significance for 10 degree of freedom. Hence, Null hypothesis is accepted. So, there is association between role and responsibility with age.

Table 4.50

Age Vs Strength of Medical Services

Critical Value	**18.30703**
Chi-Square Test Statistic	**7.131941**
***p*-Value**	**0.712933**

Decision

Since, the calculated value of chi-square is less than tabulated value at 5% level of significance for 10 degree of freedom. Hence null hypothesis is accepted and alternative hypothesis is rejected. So, there no any association between level of profession and role and responsibility.

4.4 Major Findings

1 Liquidity Performance of NMCTH and KMCTH

Due to the lack of liquidity, both hospitals may loose their several opportunities like, couldn't purchase adequate raw material on time, couldn't pay salary to staff on time, and couldn't take market opportunities.

2 Debt performance of NMCTH and KMCTH

Due to the leveraged capital structure and inefficient utlilization of debt both hospitals are bearing a burden to pay high amount as interest expenses.

3. Sales and Profitability Performance of NMCTH and KMCTH

Due to the very low performance of sales and profitability. The hospitals couldn't expense sufficiently in the planning, operation, research and development and technology for their betterment.

4. Efficiency performance of NMCTH and KMCTH

There is a average efficiency performance both in KMCTH and NMCTH in overall but assets turnover ratio of the hospitals is very low and the collection period of also long. Due to these causes the hospitals should loose there opportunity benefit. There is not efficiency in mobilization of assets and collection of cash.

5. Value performance of NMCTH and KMCTH

There is worse performance on the value of the hospitals. The hospitals couldn't provide the dividend to their shareholders till now due to the very poor earning per share. The value f the hospitals couldn't attract the potential investors toward them because of the low EPS and CPS. Due to the low level of CPS the hospitals couldn't have forward their transactions fluently.

6. Significant of data by correlation and regression

According to study we can draw conclusion from the above analysis that there is positive correlation between total assets and total liablities which shows that both are successful to mobilize their Total assets and Interest expenses to operating profit have also significant relationship. But we found that total expenses to net income have negative correlation between two variables and total expenses to sales have also insignificant relationship.

7. Primary data analysis

Primary data has been classified in four groups according to questions like Environmental factors, sources of capital, strength of medical services, as well as role and responsibility. Findings related to above study shows that in Nepal due to poor technology, patients not getting better services and better care at hospital couldn't strength hospital in Nepal.. Technology couldn't be upgraded due to high cost These days due to fluctuating political situation its very difficult to invest in project like hospital. To remove all barriers it takes time.

CHAPTER -V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Nepal is a developing country. Due to the poverty illiteration and lack of consciousness, majority of people are suffering from different kinds of diseases. Only the limited government's hospitals' are introducing to assure the proper medical treatment and also for earning monetary advantages through the quality services. "Hospitals" should have serious exercise towards the financial activities and the financial analysis is an important tool for that exercise to obtain its monetary objectives.

Nepal Medical College & Nepal Medical College Teaching Hospital (NMCTH) forms two sides of the same health institution, established primarily for imparting Medical including Health Sciences Education for the Daughters & Sons of Nepal in particular and the Daughters & Sons of the Global Community in general. At the same time the NMCTH provides health care services from its Tertiary Care Hospital as well as Community Satellite Health Centre and undertakes scientific.

The mission set by Nepal Medical College Teaching Hospital is to educate human resources for health who are competent and having caring and compassionate behavior for rendering preventive, primitive, curative and rehabitative healthcare services to the people and at the same time keep themselves updated with the latest trends in medical and health sciences education by self–enquiring minds of biomedical, sociocultural and epidemiological scientific research.

The primary objective of KMC is to provide quality medical education within a modern academic environment to produce qualified medical professionals who can contribute to the larger society by means of their knowledge, attitude, skills and professionalism. A student centered curriculum that is community as well as problem and need based is followed. KMC is quickly developing into a centre for excellence, setting new standards in medical education and high quality medical care.

Established in December 1997, Kathmandu Medical College is recognized by the Nepal Medical Council and Sri Lanka Medical Council. It is affiliated with Kathmandu University. Combined efforts of dedicated members of a highly qualified and talented team have enabled the college to move ahead in its efforts to produce well-trained medical professionals.

Financial analysis applies analytical tools and techniques to general purpose financial statements and related data to derive estimates and inferences useful in business decision. It is screening tool in selecting investment and is a forecasting tool of future financial conditions and consequences. It is diagnostic tool in accessing financing, investing and operating activities and is an evaluating tool for managerial and other business decisions.

5.2 Conclusion

Hospital and medical college are essential to everyone and every person in the society and world. Present study is focused mainly on financial performance of two hospitals. According to the study the performance of both hospital is not so in good condition. In Nepal many medical college and teaching hospital is growing these days. But to establish medical college and teaching hospital it's very difficult to collect money

Nepal had a total of 123 hospitals, eighteen health centre, and 816 health posts in 1990.There was one hospital bed for every 4,283 persons, an improvement since 1977, when there was one hospital bed for every 6,489 persons. The number of doctors totaled 879 in 1988 or one physician available for about 20,000 people. For the same period, other medical personal included 601 nurses, 2062 assistant nurses and midwives, 2790 senior and assistant auxiliary health and health assistants, and 6808 village based health workers

The liquidity performance of both MCTH, are worse and below than 0.5 in times where 2:1 is assumed to be standard. The hospitals are using debt more than equity on their capital structure but they couldn't have utilized the amount of debt effectively and so they are bearing a burden to pay high amount of interest expenses. Sales and profitability of both hospitals are poor and they couldn't have utilized their resources efficiently. The value indicators also show the works performance both in NMCTH

and KMCTH. The analysis shows the very low financial performance in both MCTH in Overall.

5.3 Recommendations

On the basis of above findings the following recommendations are suggested to address the problem of hospitals in Nepal.

- Political disputes have been main cause of not establishing hospital and college in rural areas. Doctors are unable to provide services for rural areas people due to unstable political environment. So, first step of the government should be creating peaceful political environment to correct the situation.

- Hospital should change the traditional management system and should develop modern management approaches as such new technology in healthcare system, new management training for teachers.

- Every hospital should maintain strong fiscal and monetary discipline to control the unnecessary expenditure and invest in productive sector by providing better services for patients to earn more and more money.

- Nepal Medical Council and Nepal Medical Association must provide better way to care patients and produce skilled manpower for the country.

- The government must make favorable environment to establish hospital outside the city in order to provide health service for the rural poor.

- International students exchange programme must be done to make health service effective.

- Research must be done to carry out problems and finding better way of controlling disease.

- New services must be provided for patients so that they will be benefited and get better care.

- Reorientation of education towards sustainable development.

- Increasing public awareness.
- Lot of works must be done to create awareness among medical practioners about their ethical issues of concern. (Like consent and refusal of treatment, confidentiality and medical records , treatment of children and young people, research, relations between doctors etc)
- Develop a simple procedure for the identification of underdeveloped areas and poor families, and use procedures uniformly in all sectoral programmes.
- Though many obstacles, countries have been successful in mobilizing funds, skills, knowledge and action to reverse the impact of infectious diseases. These achievements usually originate in identifying and responding to the most urgent health needs and are a result of strong government commitment.
- Removing barriers of sector, it is inevitable to provide health service to the needy and depressed.
- The economic activities must be adopted in an appropriate way.
- It's necessary to collect funds for the development of economic activities.
- Medical practitioners of Nepal must devote their time concerned to make medical sector a grand success.
- Make public knowledge of infectious diseases. Health care resources ought to allocated without discrimination to make all Nepalese healthy

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APPENDIX 1

1. T-test of Current Assets and Current Liablities Ratio

X_1	x_1	$(x_1)^2$	X_2	X_2	$(X_2)2$
0.51	-0.114	0.012996	0.41	-0.104	0.010816
0.41	0.41	0.1681	0.49	0.49	0.2401
0.69	0.69	0.4761	0.42	0.42	0.1764
0.91	0.91	0.8281	0.64	0.64	0.4096
0.6	0.6	0.36	0.61	0.61	0.3721
3.12			2.57		
$\overline{X_1}$ **=0.62**	$\sum (x_1)^2 = 1.8452$		$\overline{X_2}$ **= 0.51**	$\sum (x2)^2 = 1.2091$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (1.8456 + 1.2090)$$

$$S^2 = 0.3818$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.62 - 0.51}{\sqrt{0.3818(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.281$$

$$\therefore t = 0.281$$

2. T-Test of Quick Assets to Current Liablities

X_1	x_1	$(x_1)^2$	X_2	X_2	$(X_2)2$
0.45	-0.11	0.0121	0.31	0.31	0.0961
0.35	0.35	0.1225	0.41	0.41	0.1681
0.62	0.62	0.3844	0.37	0.37	0.1369
0.82	0.82	0.6724	0.58	0.58	0.3364
0.56	0.56	0.3136	0.55	0.55	0.3025
2.8			2.57		
$\overline{X_1}$ **=0.56**	$\sum (x_1)^2 = 1.5050$		$\overline{X_2}$ **= 0.44**	$\sum (x2)^2 = 0.9618$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$S^2 = \frac{1}{(5+5-2)} * (1.5050 + 0.9618)$

$S^2 = 0.3083$

$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$

$= \frac{0.56 - 0.44}{\sqrt{0.3083(\frac{1}{5} + \frac{1}{5})}}$

$= 0.1233$

$\therefore t = 0.12331$

3. T-test of Debt to Equity Ratio

X_1	x_1	$(x_1)^2$	X_2	x_2	$(X_2)2$
1.49	-0.56	0.3136	1.25	-0.056	0.003136
1.47	1.47	2.1609	1.31	1.31	1.7161
2.28	2.28	5.1984	1.59	1.59	2.5281
2.32	2.32	5.3824	1.23	1.23	1.5129
2.69	2.69	7.2361	1.15	1.15	1.3225
10.25	$\sum (x_1)^2 = 20.2914$		6.53	$\sum (x2)^2 = 7.0827$	
$\overline{X_1}$ **=2.05**			$\overline{X_2}$ **= 0.44**		

$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\ 2} + \sum x_2^{\ 2})$

$S^2 = \frac{1}{(5+5-2)} * (20.2914 + 7.0827)$

$S^2 = 3.42$

$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$

$= \frac{2.05 - 1.306}{\sqrt{3.42(\frac{1}{5} + \frac{1}{5})}}$

$= 0.636$

$\therefore t = 0.636$

4. T-test of Debt to Assets Ratio.

X_1	x_1	$(x_1)^2$	X_2	x_2	$(x_2)2$
0.6	-0.56	0.3136	0.56	-0.056	0.003136
0.59	1.47	2.1609	0.57	1.31	1.7161
0.7	2.28	5.1984	0.61	1.59	2.5281
0.7	2.32	5.3824	0.55	1.23	1.5129
0.73	2.69	7.2361	0.54	1.15	1.3225
3.32			2.83		
$\overline{X_1}$ **=0.66**	$\sum (x_1)^2 = 1.8650$		$\overline{X_2}$ **= 0.56**	$\sum (x2)^2 = 1.2911$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1{}^2 + \sum x_2{}^2)$$

$$S^2 = \frac{1}{(5+5-2)} * (1.8650 + 1.2911)$$

$$S^2 = 0.395$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.66 - 0.56}{\sqrt{0.395(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.246$$

$\therefore t = 0.246$

5. T-Test of Operating Profit to Interest Expenses

X_1	x_1	$(x_1)^2$	X_2	x_2	$(x_2)2$
1.08	-0.418	0.174724	1.22	-0.056	0.003136
1.36	1.36	1.8496	1.72	1.31	1.7161
1.47	1.47	2.1609	1.61	1.59	2.5281
1.58	1.58	2.4964	1.92	1.23	1.5129
2	2	4	2.23	1.15	1.3225
7.49			8.70		
$\overline{X_1}$ **=1.498**	$\sum (x_1)^2 = 10.6816$		$\overline{X_2}$ **= 1.74**	$\sum (x2)^2 = 14.4802$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1{}^2 + \sum x_2{}^2)$$

$$S^2 = \frac{1}{(5+5-2)} * (10.6816 + 14.4802)$$

$$S^2 = 3.145$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{1.498 - 1.74}{\sqrt{3.145(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.207$$

$\therefore t = 0.207$

6. T-test of Net Cash flow to Interest Expenses.

X_1	X_1	$(X_1)^2$	X_2	X_2	$(X_2)2$
0.112	0.04726	0.002234	0.138	0.0548	0.003003
0.0247	0.0247	0.00061	0.085	0.085	0.007225
0.08	0.08	0.0064	0.052	0.052	0.002704
0.075	0.075	0.005625	0.089	0.089	0.007921
0.032	0.032	0.001024	0.052	0.052	0.002704
0.3237			0.416		
$\overline{X_1}$ **=0.065**	$\sum (x_1)^2 = 0.01589$		$\overline{X_2}$ **= 0.023**	$\sum (x2)^2 = 0.02355$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1{}^2 + \sum x_2{}^2)$$

$$S^2 = \frac{1}{(5+5-2)} * (0.01589 + 10.02355)$$

$$S^2 = 0.004$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.065 - 0.023}{\sqrt{0.004(\frac{1}{5} + \frac{1}{5})}}$$

$$= 1.05$$

$\therefore t = 1.05$

7. T- Test of Gross Income to Total Profit.

X_1	x_1	$(x_1)^2$	X_2	x_2	$(X_2)2$
0.5	-0.002	4E-06	0.6	-0.058	0.003364
0.46	0.46	0.2116	0.66	0.66	0.4356
0.49	0.49	0.2401	0.7	0.7	0.49
0.53	0.53	0.2809	0.71	0.71	0.5041
0.53	0.53	0.2809	0.62	0.62	0.3844
2.51			3.29		
$\overline{X_1}$ **=0.502**	$\sum(x_1)^2 = 1.01350$		$\overline{X_2}$ **= 0.65**	$\sum(x2)^2 = 1.81746$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (1.01350 + 1.81746)$$

$$S^2 = 0.3538$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.502 - 0.650}{\sqrt{0.004(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.393$$

$\therefore t = 0.393$

8. T- Test of Net Income to Total Income

X_1	x_1	$(x_1)^2$	X_2	x_2	$(X_2)2$
-0.01	-0.0378	0.001429	0.007	-0.027	0.000729
0.012	0.012	0.000144	0.018	0.018	0.000324
0.059	0.059	0.003481	0.029	0.029	0.000841
0.03	0.03	0.0009	0.045	0.045	0.002025
0.048	0.048	0.002304	0.071	0.071	0.005041
0.139			3.29		
$\overline{X_1}$ =0.03	$\sum(x_1)^2 = 0.0278$		$\overline{X_2}$ **= 0.03**	$\sum(x2)^2 = 0.0089$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

9. T-test of Net Income to Total Income

X_1	x_1	$(x_1)^2$	X_2	x_2	$(x_2)2$
-0.026	-0.0976	0.009526	0.015	-0.0572	0.003272
0.026	0.026	0.000676	0.043	0.043	0.001849
0.151	0.151	0.022801	0.063	0.063	0.003969
0.08	0.08	0.0064	0.101	0.101	0.010201
0.127	0.127	0.016129	0.139	0.139	0.019321
0.358			0.361		
$\overline{X_1}$ **=0.071**	$\sum (x_1)^2 = 0.05553$		$\overline{X_2}$ **= 0.07**	$\sum (x2)^2 = 0.03861$	

$$S^2 = \frac{1}{(n1 + n2 - 2)} * (\sum x_1{}^2 + \sum x_2{}^2)$$

$$S^2 = \frac{1}{(5 + 5 - 2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

10. T-test of Earning after Tax to Shareholders Equity.

X_1	x_1	$(x_1)^2$	X_2	X_2	$(X_2)2$
-0.026	-0.0976	0.009526	0.015	-0.0572	0.003272
0.026	0.026	0.000676	0.043	0.043	0.001849
0.151	0.151	0.022801	0.063	0.063	0.003969
0.08	0.08	0.0064	0.101	0.101	0.010201
0.127	0.127	0.016129	0.139	0.139	0.019321
0.358			0.335		
$\overline{X_1}$ **=0.72**	$\sum (x_1)^2 = 0.3862$		$\overline{X_2}$ **= 0.67**	$\sum (x2)^2 = 0.03382$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$$\therefore t = 0.165$$

11. T-Test of Total Expenses and Sales

X_1	x_1	$(x_1)^2$	X_2	X_2	$(X_2)2$
10.29	-5.78	33.4084	6.29	-1.528	2.334784
15.64	15.64	244.6096	5.47	5.47	29.9209
17.31	17.31	299.6361	7.13	7.13	50.8369
16.23	16.23	263.4129	8.46	8.46	71.5716
20.88	20.88	435.9744	11.74	11.74	137.8276
80.35			3.449		
$\overline{X_1}$ **=0.7068**	$\sum (x_1)^2 = 1.9294$		$\overline{X_2}$ **= 0.6998**	$\sum (x2)^2 = 1.9978$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

12. T-Test of Cost of goods sold to Average Inventory.

X_1	x_1	$(x_1)^2$	X_2	x_2	$(x_2)2$
10.29	-5.78	33.4084	6.29	-1.528	2.334784
15.64	15.64	244.6096	5.47	5.47	29.9209
17.31	17.31	299.6361	7.13	7.13	50.8369
16.23	16.23	263.4129	8.46	8.46	71.5716
20.88	20.88	435.9744	11.74	11.74	137.8276
80.35			39.09		
$\overline{X_1}$ **=16.07**	$\sum(x_1)^2 = 1277.041$		$\overline{X_2}$ **= 7.818**	$\sum(x2)^2 = 292.4918$	

$$S^2 = \frac{1}{(n1 + n2 - 2)} * (\sum x_1^{\ 2} + \sum x_2^{\ 2})$$

$$S^2 = \frac{1}{(5 + 5 - 2)} * (1277.04 + 292.4918)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

13. T-Test of Cost of Goods Sold to Average Inventory

X_1	X_1	$(X_1)^2$	X_2	X_2	$(X_2)2$
35.47	11.498	132.204	58.03	7.994	63.90404
23.34	23.34	544.7556	66.73	66.73	4452.893
21.08	21.08	444.3664	51.19	51.19	2620.416
22.49	22.49	505.8001	43.14	43.14	1861.06
17.48	17.48	305.5504	31.09	31.09	966.5881
119.86			39.09		
$\overline{X_1}$ =**23.972**	$\sum(x_1)^2 = 1932.677$		$\overline{X_2}$ = **7.818**	$\sum(x2)^2 = 292.4918$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (1932.67 + 292.49)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

14. T-test of Sales to Total Assets

X_1	X_1	$(X_1)^2$	X_2	X_2	$(X_2)2$
0.4	-0.004	0.000016	0.43	-0.024	0.000576
0.47	0.47	0.2209	0.42	0.42	0.1764
0.39	0.39	0.1521	0.47	0.47	0.2209
0.38	0.38	0.1444	0.44	0.44	0.1936
0.38	0.38	0.1444	0.51	0.51	0.2601
2.02			2.27		
$\overline{X_1}$ =**0.40**	$\sum(x_1)^2 = 0.6618$		$\overline{X_2}$ = **0.45**	$\sum(x2)^2 = 0.8515$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

15. T-Test of Average Account Receivable to Daily Sales

X_1	x_1	$(X_1)^2$	X_2	x_2	$(X_2)2$
72.28	29.496	870.014	0.43	-0.024	0.000576
54.67	54.67	2988.809	0.42	0.42	0.1764
41.62	41.62	1732.224	0.47	0.47	0.2209
24.7	24.7	610.09	0.44	0.44	0.1936
20.65	20.65	426.4225	0.51	0.51	0.2601
42.78			2.27		
$\overline{X_1}$ **=213.92**	$\sum(x_1)^2 = 0.6618$		$\overline{X_2}$ **= 0.45**	$\sum(x2)^2 = 0.8515$	

$$S^2 = \frac{1}{(n1 + n2 - 2)} * (\sum x_1^{\ 2} + \sum x_2^{\ 2})$$

$$S^2 = \frac{1}{(5 + 5 - 2)} * (0.6618 + 0.8515)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$\therefore t = 0.165$

16. T-test of Earning after tax to shareholders equity.

X_1	x_1	$(X_1)^2$	X_2	X_2	$(X_2)2$
0.0035	-0.01149	0.000132	0.0019	-0.00934	8.72E-05
0.0043	0.004287	0.000184	0.0056	0.005554	3.08E-05
0.0273	0.027313	0.000746	0.0086	0.008595	7.39E-05
0.0149	0.014881	0.000221	0.0151	0.01505	0.000227
0.0249	0.02486	0.000618	0.0252	0.025157	0.000633
0.0748			0.0562		
$\overline{X_1}$ **=0.014**	$\sum (x_1)^2 = 0.001736$		$\overline{X_2}$ **= 0.05627**	$\sum (x2)^2 = 0.001051$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$$\therefore t = 0.165$$

17. T-Test of Cash Flow per Share (Net Cash Flow to Total Share Outstanding).

X_1	x_1	$(x_1)^2$	X_2	x_2	$(x_2)2$
0.0035	-0.01149	0.000132	0.0019	-0.00934	8.72E-05
0.0043	0.004287	0.000184	0.0056	0.005554	3.08E-05
0.0273	0.027313	0.000746	0.0086	0.008595	7.39E-05
0.0149	0.014881	0.000221	0.0151	0.01505	0.000227
0.0249	0.02486	0.000618	0.0252	0.025157	0.000633
0.0748			0.0562		
$\overline{X_1}$ **=0.014**	$\sum (x_1)^2 = 0.001736$		$\overline{X_2}$ **= 0.05627**	$\sum (x2)^2 = 0.001051$	

$$S^2 = \frac{1}{(n1+n2-2)} * (\sum x_1^{\,2} + \sum x_2^{\,2})$$

$$S^2 = \frac{1}{(5+5-2)} * (0.0278 + 0.0089)$$

$$S^2 = 0.005$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

$$= \frac{0.027 - 0.034}{\sqrt{0.005(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.165$$

$$\therefore t = 0.165$$

APPENDIX 2

1. Karl Pearson's co-efficient of correlation between Total Assets and Net Income

Co-efficient correlation of NMCTH

X	Y	X^2	Y^2	XY
307797	-3120	94739239447	9736272.09	-960420227.22
32442.2	3942	1052496340.84	15539364.00	127887152.40
425379	25116	180947038413.69	630793363.36	10683641277.72
425379	13683	180947038413.69	187229962.24	5820541827.84
455079	22860	207096896241.00	522584172.01	10403151447.90
1646076	**62480.6**	**664782708855.98**	**1365883134**	**26074801479**

$$R = \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 X \sqrt{N\sum y^2 - (\sum y)^2}}}$$

$$= \frac{5X26074801479 - 1646076X62480.60}{\sqrt{5X664782708855.98 - (1646076)^2 X \sqrt{5X1365883134 - (62480.60)^2}}}$$

r = 0.6490

Computation of probable error of NMCTH

$$P.E.r = 0.6745 \text{ X } \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \text{ X } \frac{1-(0.6490)^2}{\sqrt{5}}$$

$$= 0.4070$$

Co-efficient correlation of KMCTH

X	Y	X^2	Y^2	XY
220104.7	1432.3	48446078962	2051483.29	315255961.81
233954.4	4218.6	54734661279	17796585.96	986960031.84
218902	6421.3	47918085604	41233093.69	1405635412.60
251137.2	11241.6	63069893224	126373570.56	2823183947.52
264219.2	18795.8	69811785649	353282097.64	4966211239.36
1188318	42109.6	283980504717.93	540736831.1	10497246593

R $= \dfrac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 X\sqrt{N\sum y^2} - (\sum y)^2}}$

$= \dfrac{5X1188318 - 1188318X42109.60}{\sqrt{5X283980504717.93 - (1188318)^2 X\sqrt{5X540736831.1 - (42109.60)^2}}}$

r = 0.9080

Computation of probable error of KMCTH

P.E.r = 0.6745 X $\dfrac{1-r^2}{\sqrt{n}}$

= 0.6745 X $\dfrac{1-(0.9080)^2}{\sqrt{5}}$

= 0.3177

2) Karl Pearson's co-efficient of correlation between Interest Expenses to Operating Profit

Co-Efficient of correlation of NMCTH

X	Y	X^2	Y^2	XY
26331	28372	693321561	804959035.2	747057865.8
29611.1	40176	876814282.1	1614078835	1189641700
37124.9	54501	1378258200	2970304500	2023325612
41886.3	66174	1754462128	4379011511	2771788205
34412.7	68939	1184233921	4752544358	2372366801
169366	**258161**	**5887090092**	**14520898239**	**9104180185**

R $= \dfrac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 X\sqrt{N\sum y^2} - (\sum y)^2}}$

$= \dfrac{5X1188318 - 1188318X42109.60}{\sqrt{5X283980504717.93 - (1188318)^2 X\sqrt{5X540736831.1 - (42109.60)^2}}}$

= 0.8505

Computation of probable error of NMCTH

$$P.E.r = 0.6745 \text{ X } \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \text{ X } \frac{1-(0.8505)^2}{\sqrt{5}}$$

= 0.5022

Co-Efficient of correlation of KMCTH

X	Y	X^2	Y^2	XY
17543	21434.50	307756849	459437790.25	376025433.50
20089	34645.80	403567921	1200331457.64	695999476.20
23428	37691.20	548871184	1420626557.44	883029433.60
21624	41444.60	467597376	1717654869.16	896198030.40
25218	56218.70	635947524	3160542229.69	1417723176.60
107902	191434.8	2363740854.00	7958592904	4268975550

$$\mathbf{R} = \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 X \sqrt{N\sum y^2} - (\sum y)^2}}$$

$$= \frac{5X4268975550 - 107902X191434.80}{\sqrt{5X2363740854 - (107902)^2 X \sqrt{5X7958592904 - (7958592904)^2}}}$$

$$r = 0.2580$$

3) Total Expenses to Sales

Coefficient of correlation of NMCTH

X	Y	X^2	Y^2	XY
94646.7	122290	11574382802	14954941932	11574382802
121281	149996	18191743388	22498920013	18191743388
113438	166059	18837506559	27575657905	18837506559
108563	170992	18563357812	29238332461	18563357812
114229	110400	12610915103	12188182080	12610915103
552157.7	719737	61369448035.89	106455659661.00	79777696757.00

$$\mathbf{R=} \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 - \sqrt{N\sum y^2 - (\sum Y)^2}}}$$

$$= \frac{5X79777905663 - 552158.2X719737}{\sqrt{5X61369448035.89 - (552157)^2 X\sqrt{5X106455659661 - (719737)^2}}}$$

r = 0.7464

Computation of probable error of NMCTH

$$\text{P.E.r} = 0.6745 \text{ X } \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \text{ X } \frac{1-(0.7464)^2}{\sqrt{5}}$$

$$= \mathbf{0.7464}$$

Coefficient of correlation of KMCTH

X	Y	X^2	Y^2	XY
64528.4	94289	6084286043	8890321232	6084286043
79402.1	97496	7741403022	9505509014	7741403022
69689.6	102349	7132626026	10475215452	7132626026
74128.7	10146	752124615.9	102945374.4	752124615.9
88276.5	134800	11899654545	18170986080	11899654545
376025.3	439079.2	33610094252	47144977153.42	33610094252

$$\mathbf{R}= \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum X)^2 - \sqrt{N\sum y^2 - (\sum Y)^2}}}$$

$$\text{r} = \frac{5X79777905663 - 552158.2X719737}{\sqrt{5X61369448035.89 - (552157)^2 X\sqrt{5X106455659661 - (719737)^2}}}$$

= 0.3487

Computation of probable error of NMCTH

$$\text{P.E.r} = 0.6745 \text{ X } \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \text{ X } \frac{1-(0.0.3487)^2}{\sqrt{5}}$$

= 0.5907

4) Sales to Net Income (NMCTH)

X	Y	X^2	Y^2	XY
122290	-3120	14954844100.00	9734400.00	-381544800.00
149996	3942	22498800016.00	15539364.00	591284232.00
166059	25116	27575591481.00	630813456.00	4170737844.00
170992	13683	29238264064.00	187224489.00	2339683536.00
180400	22860	32544160000.00	522579600.00	4123944000.00
789737	62481	126811659661.00	1365891309.00	10844104812.00

$$\mathbf{R=}\ \frac{N\sum xy-\sum x.\sum y}{\sqrt{N\sum x^2-(\sum X)^2}-\sqrt{N\sum y^2-(\sum Y)^2}}$$

$$r = \frac{5X10844064314-789738.30X62480.60}{\sqrt{5X126811659661-(789737)^2}\,X\sqrt{5X1365891309-(62481)^2}}$$

r = 0.8850

Computation of probable error of NMCTH

$$P.E.r = 0.6745\ X\ \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745\ X\ \frac{1-(0.1754)^2}{\sqrt{5}}$$

$$= 0.1754$$

Sales to Net Income (KMCTH)

X	Y	X^2	Y^2	XY
94288.5	1432.3	135049418.6	2051483.29	135049418.6
97496.2	4218.6	411297469.3	17796585.96	411297469.3
102349	6421.3	657210423.1	41233093.69	657210423.1
111406	11242	1252383938	126373570.6	1252383938
134800	18796	2533670081	353282097.6	2533670081
540339.2	42109.6	4989611330	540736831.14	4989611330

$$\mathbf{R} = \frac{N\sum xy-\sum x.\sum y}{\sqrt{N\sum x^2-(\sum X)^2}-\sqrt{N\sum y^2-(\sum Y)^2}}$$

$$= \frac{5X10844064314 - 789738.30X62480.60}{\sqrt{5X126811659661 - (789737)^2}\, X \sqrt{5X1365891309 - (62481)^2}}$$

$= 0.9980$

Computation of probable error of NMCTH

$$\text{P.E.r} = 0.6745 \text{ X } \frac{1 - r^2}{\sqrt{n}}$$

$$= 0.6745 \text{ X } \frac{1 - (0.9980)^2}{\sqrt{5}}$$

$= 0.00723.$

APPENDIX-3

Respected Sir/Madam,

I am conducting survey on comparative study of **Nepal Medical College Teaching Hospital** and **Kathmandu Medical College Teaching Hospital**. I would appreciate you providing me just few minutes of your busy schedule to answer the questions appearing in enclosed questionnaire which will help to fulfill the objective for partial fulfillment of Master Degree in Business Studies. Each response will be anonymous. Findings by the researcher will be trait to know more about hospital, origin of hospital, development of hospital as well as financial condition of hospital. Each of your idea and opinion will really plays an important role for present research of my current study as well as for those who wants to conduct research in the same field.

Thank you very much for your help and cooperation!

Sincerely yours.
Monika Singh

		Disagree Totally	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Totally
		1	2	3	4	5	6
Q.No 1	Political environments are favorable to extend the hospital service in Nepal.						
Q. No 2	Technological environment development is sufficient to provide the medical service in Nepal.						
Q. No 3	Share Capital is favorable to the hospital in Nepal.						
Q. No 4	Debt or Loan Capital is favorable to the medical service in Nepal						
Q. No 5	Nepalese medical college can produce sound knowledge manpower.						
Q. No 6	Position of hospital is totally good in Nepal.						
Q.No 7	Are you sure that hospital can provide quality and health care services for people of Nepal.						
Q. No 8	To produced skilled manpower hospital should adopt modern education and technique.						
Q. No 9.	Nepalese medical college can provide modern education.						
Q.No 10.	Equity and debt capital is the effective financing in hospital sector.						
Q. No 11	National leaders are serious to improve the quality health service.						

Q.No 12	Government can facilitate to extend the medical sectors at Nepal.						
Q.No 13	There is necessary further rules and regulation to the development of hospital.						
Q.No 14	Lack of appropriate capital is the reason of poor technology in Nepalese Hospital.						
Q. No 15	The consumers are capable to consume the production and service of Nepalese hospitals						
Q. No 16	Nepalese medical college can produce every sector manpower.						
Q. No 17	Nepalese hospital can provide every service to the patient.						
Q.No 18	Materials relating to medical services can produce in Nepal.						
Q. No 19	Centralization of medical services is harmful for the Nepalese people.						
Q. No 20	Private and public institutions are coordinating to provide the services to people.						
Q. No 21	There is no needed any other investigation research center for the development medical services.						

Details of Respondents

Age:
Profession:
Experience in Profession:
Education:
Level of Profession: