









The 4th International Conference on Sustainable Innovation (ICoSI) 2020

Cutting Edge Innovations for Sustainable Development Goals

Universitas Muhammadiyah Yogyakarta (Indonesia) October 13 - 14 2020

https://icosi.umy.ac.id/

Focal Conferences



- (ICPU) The 2nd International Conference on Pharmaceutical Updates
- (ICOMS) The 6th International Conference on Management Sciences
- (ICLAS) The 9th International Conference on Law and Society
- (ICMHS) The 4th International Conference Medical and Health Sciences
- (ICAF) The 6th International Conference for Accounting and Finance
- (ILEC) The 2nd International Language and Education Conference
- (ICONURS) The 2nd International Conference on Nursing
- (ICITAMEE) The 1st International Conference on Information Technology, Advanced Mechanical and Electrical Engineering
- (IConARD) International Conference on Agribusiness and Rural Development
- 🛍 (ISHERSS) The 2nd International Symposium on Social Humanities Education and Religious Sciences
- (ICONPO) The 10th International Conference on Public Organization
- (DREAM) The 5th Dental Research and Exhibition Meeting
- (ICHA) The 5th International Conference on Hospital Administration
- (ICOSA) The 3rd International Conference on Sustainable Agriculture





















































































Proceedings

4th International Conference on Sustainable Innovation

2020

Publisher UMYPress

Lembaga Penelitian, Pengabdian, dan Pengembangan Masyarakat (LP3M)

Universitas Muhammadiyah Yogyakarta

Address

Gedung D Lantai 2

Universitas Muhammadiyah Yogyakarta

Jalan Brawijaya, Bantul,

55183 Indonesia

ISBN: 978-623-7054-43-6





The 4th ICoSI 2020 Committees

Advisory Board

Dr. Ir. Gunawan Budiyanto, M.P, IPM

Prof. Dr. Ir. Sukamta, M.T., IPM

Prof. Dr. Nano Prawoto, S.E., M.Si

Dr. Suryo Pratolo, M.Si, Akt

Prof. Hilman Latief, MA., Ph.D

Prof. Dr. Achmad Nurmandi, M.Sc

Chairs

Dr. Yeni Rosilawati, S.IP., S.E., MM

Dr. Arie Paksi, S.IP., M.A

Dr. Dyah Dewanti

Secretariat

Abdul Rasyid Ghazali, M.Sc.

Mariska Intan Sari, S.S., M.A

Fitria Rahmawati, S.Pd. M.Hum.

Khanza Nabila Iftina, S.I.Kom

Qholiva Yuni Fadilla, S.I.Kom

Treasurer

Twediana Budi Hapsari, S.Sos., M.SI., Ph.D

Safaroh Ivory Fananda, S.Sos

Scientific Committee

Prof. Agus Setyo Muntohar, S.T., M.Eng.Sc., Ph.D.(Eng.)

dr. Iman Permana, M.Kes., Ph.D

Dr. Sudarisman, M.T

Iwan Satriawan, Ph.D

Dr. Indira Prabasari, M.P

Eko Priyo Purnomo, S.IP., M.Si., M.Res., Ph.D

Dr Nuryakin, M.M

Prof. Dr. Achmad Nurmandi, M.Sc.

Rizal Yaya, S.E., M.Sc., Ph.D., Ak, CA

Dr. Mukti Fajar ND, SH., M.Hum

Proceedings and Journals

dr. Iman Permana, M.Kes., Ph.D

Dianita Sugiyo, S.Kep., Ns., MHID

Dr. Dyah Mutiarin, M.Si.

Program and Event

Hijriyah Oktaviani, S.IP, M.M

Krisna Mulawarman, S.Sos, M.Sn



IT Support

Miftahul Yaum Winny Setyonugroho. S.Ked., M.T., Ph.D Anhar Wahyu, S.E

Food and Beverages

Dr. Alni Rahmawati, M.M Dr. Sri Handari Wahyuningsih, M.M Siti Wijayanti Dra. Luluk Chusniati

Equipment, Facilities and Infrastructure

Bagus Subandono, ST, M. Eng Aris Nuryanta, S.H Galuh Sudarsono

Assets and Logistics

Eko Wahyudi, S.E Noor Fajari Suparno

Reviewers of 4th ICoSI 2020

Ahmad Zaki, Ph.D.

Al Afik, S.Kep., Ns., M.Kep.

Ali Awaludin, Ph.D. Ana Majdawati

Angga Fajar Setiawan, S.T., M.Eng., Ph.D.

Anita Rahmawati, S.T., M.T.

Anugrah Ilahi, Ph.D.

apt. Aji Winanta, M.Sc

apt. Binar Asrining Dhiani, Ph.D

apt. Didik Setiawan, Ph.D

apt. Erza Genatrika, M.Sc

apt. Hari Widada, M.Sc

apt. Indah Hairunisa, S. Farm., M.Botech

apt. Ingenida Hadning, M.Sc

apt. Lusi Putri Dwita, M.Si

apt. Nurul Maziyyah, M.Sc

apt. Raditya Weka, M.Farm

apt. Rifki Febriansah, M.Sc

Assoc. Prof. Dr. Khairil Azmin Mokhtar

Asti Widuri

Azizah Khoiriyati, S.Kep., Ns., M.Kep

Cahyu Septiwii, M.Kep., Sp.Kep., MB., Ph.D.

Dedi Suryadi

Dina Wahyu Trisnawati, Ph.D.

Dr. Ahim Abdurahin M.Si., SAS., Ak., CA

Dr. Anas Puri, S.T., M.T.

Dr. Ani Hairani

Dr. apt. Bangunawati Rahajeng, M.Si

Dr. apt. Dwi Utami, M.Si

Dr. apt. Ika Yuni Astuti, M.Si

Dr. apt. Nurkhasanah, M.Si

Dr. apt. Siska, M.Farm

Dr. apt. Supandi, M.Si

Dr. Arni Surwanti, M.Si.

Dr. Astuti Masdar

Dr. Birgit C. P. Koch, PharmD, Ph.D

Dr. dr. Arlina Dewi, M.Kes., AAK

Dr. Dr. Nur Hidayah, M.M.

Dr. dr. Sri Sundari, M.Kes.

Dr. drg. Dwi Aji Nugroho MDSc

Dr. Drh. Sapto Yuliani, M.P

Dr. Edi Soesanto, S.Kp., M.Kes

Dr. Eko Hanudin

Dr. Elsye Maria Rosa, M.Kep.

Dr. Fadia Fitiyanti

Dr. Firman Pribadi, M.Si.

Dr. Firman Pribadi, SE., MM.

Dr. Hosam Alden Riyadh A.Alazeez, M.S.A

Dr. Ihsan Nurkomar

Dr. Ika Nurul Qamari, SE., M.Si

Dr. Indah Fatmawati, M.Si

Dr. Innaka Ageng Rineksane

Dr. Istianah ZA

Dr. Lis Noer Aini

Dr. Lisa Musharyanti, S.Kep., Ns., M.Med.Ed

Dr. Mahendro Prasetyo Kusumo

dr. Maria Ulfa, MMR., Ph.D.

Dr. Muhammad Ichsan

Dr. Muria Indah Sokowati, M.Si

Dr. Ns. Umi Solikhah, S.Pd., M.Kep,

Dr. Nur Chayati, S.Kep., Ns., M.Kep

Dr. Nuryakin,MM.

Dr. Qurratul Aini, S.KG., M.Kes.

Dr. Seplika Yadi

Dr. Siti Nur Aisyah

Dr. Titih Huriah, M.Kep., Sp., Kom

Dr. Yeni Rosilawati

Dr.Eng. Rahmita Sari Rafdinal, S.ST., M.Eng.

Dr.Eng.Pinta Astuti, S.T., M.Eng.

Drg Arya Adiningrat PhD

Drg Atiek Driana R Sp.KGA

Drg Dian Yosi A MDSc PhD

Drg Dwi Suhartiningtyas MDSc

Drg Edwyn Saleh Sp.BMM

Drg Erlina Sih Mahanani

Drg Fahmi Yunisa Sp. Pros

Drg Hartanti Sp.Perio

Drg Iwan Dewanto MMR PhD

drg Sartika Puspita MDSc

Dr. Dyah Ekaari Sekar J

Eko Purwanti

Eko Purwanti, Ph.D

Ema Waliyanti, S.Kep., Ns., MPH

Endro Dwi Hatmanto

Erna Rochimawati, Ph.D

Erna Rochmawati

Etik Kresnawati, Dr., M.Si.

Evi Rahmawati, S.E., M.Acc., Ph.D., Ak., CA.

Evy Rahman Utami, S.E., M.Sc.

Fanny Monika, S.T., M.Eng.

Ferika Indarwati, S.Kep., Ns., M.Ng

Fitri Arofiati, S.Kep., Ns., MAN., Ph.D

Galuh Suryandari

Genesiska, S.Si., M.Sc.

Gina Puspita

Hafiez Sofyani, S.E., M.Sc.

Harjanti Widiastuti, Dr., S.E., M.Si., Ak.

Hendy Setiawan, Ph.D.

Hidayatul Kurniawati

Ida Faridah, S.Kp., M.Kes

Ietje Nazaruddin, Dr., M.Si., Ak., CA.

Ika Setyawati

Ikhlas Muhammad Jenie

Iman Permana

Imaniar Ranti Inayati

Indira Prabasari, Ph.D.

Ir. Latif Budi Suparma, M.Sc., Ph.D

Iwan Satriawan, Ph.D

Jebul Suroso, Ns. M.Kep

Jenita Doli Tine Donsu, S.KM. M.Si

Lilis Suryani

M. Bahrul Ilmi, S.E., M.E.Sy

M. Endriyo Susila, Ph.D.

M. Syifa Amin Widigdo, Ph.D

Mahendro Prasetyo Kusumo

Matyana Dwi Cahyati, S.T., M.Eng.

Meika Kurnia Puji, RDA,M.Si.,Ph.D." Muhammad Chairunsyah Riskyta Akbar

Muhammad Hazyar Arumbinang, S.H., LL.M

Muhammad Ibnu Syamsi, S.T., M.Eng.

Mundakir, S,Kep. Ns. M.Kep

Naim Abdul Majid

Nasrullah, S.H., S.Ag., MCL. Naufal Bagus Pratama, S.H.

Noriko Kuwano

Nurvita Risdiana, S.Kep., Ns., M.Sc

Prof. Djoko Legono

Prof. Dr. Alan Lau, Pharm.D., FCCP

Prof. Dr. apt. Dyah Aryani Perwitasari S.Si., M.Si

Prof. Dr. Arthorn Riewpaiboon

Prof. Heru Kurnianto

Tjahjono,MM"

Prof. Hilman Latief, Ph.D.

Prof. Hironori Yasuda

Prof. Iman Satyarno

Prof. Ir. Mochamad Teguh, MSCE., Ph.D.

Prof. Jamsari

Prof. Keith Walters

Prof. Kriengsak Panuwatwanich

Prof. Maria Rosa Mosquera Losada

Prof. Maurice S. B. Ku

Prof. Michael Henry Boehme

Prof. Normah Mohd Noor

Punang Amaripuja, SE., ST., M.IT

Ratna Indriawati

Retno Widowati PA., M.Si., Ph.D.

Rizal Yaya, S.E., M.Sc., Ph.D., Ak., CA.

Rizka Fakhriani

Rofi Aulia Rahman, S.H., LL.M

sabtanti harimurti

Shanti Wardaningsih, Ph.D

Sherly Usman SN Nurul Makiyah

Sri Atmaja P. Rosyidi, S.T., MSc.Eng., Ph.D., PE

Sri Rejeki M Sri Sundari Sudarisman Survanto

Suryo Pratolo, Dr., S.E., M.Si., Ak., CA., AAP-A.

Sutantri, Ns., M. Sc., Ph.D

Talqis Nurdianto

Taufiq Hidayat, S.P., M.Sc.

Taufiqur Rahman, S.IP, M.A, Ph.D.

Titiek Hidayati Tri Pitara

Tri Wulandari Kesetyaningsih

Tumin, Ph.D

Twediana Budi Hapsari, Ph.D

Wantoro, M.Kep., Ns., Sp.Kep., M.B., Ph.D

Warih Andan

Winny Setyonugroho, Ph.D.

Yanuar Fahrizal., S.Kep., Ns., M.Kep., Sp.Kep.J

Dr. Yoni Astuti

Yordan Gunawan, S.H., Int.MBA., M.H



Preface by the Chairperson of the 4th ICoSI 2020



Dr. Yeni Rosilawati, S.IP. S.E., MM.

Assalamu'alaikum Wr. Wb.

All praise is due to Allah, the Almighty, on whom we depend for sustenance and guidance. Prayers and peace be upon our Prophet, Muhammad SAW, his family and all of his companions.

On behalf of the organizing committee, it is my pleasure and privilege to welcome the honourable guests, distinguished keynote & invited speakers, and all the participants.

With the main theme of "Cutting-Edge Innovations on Sustainable Development Goals (SDGs)", the 4th International Conference on Sustainable Innovation (ICoSI) 2020 serves as a forum to facilitate scholars, policy makers, practitioners, and other interested parties at all levels from Indonesia and abroad to present their novel ideas, promote cutting-edge research, and to expand collaboration network. The conference has about 1373 participants participating from more than 8 countries 4 continents all over the world, making this conference a truly international conference in spirit.

This multidisciplinary conference was first held in 2012 and has undertaken various changes and adopted to the current technological trends of our education system. From having this conference with just 175 participants back in 2012 we have come a long way in making the conference a huge success with more than 1373 participants participating in this two-day conference.

Formerly, this conference consisted of only 9 (nine) focal conferences. This year, there are 14 focal conferences from various disciplines, namely: 1) The 2nd International Conference on Pharmaceutical Updates (ICPU), 2) The 6th International Conference on Management Sciences



(ICoMS), 3) The 9th International Conference on Law and Society (ICLAS), 4) The 4th International Conference Medical and Health Sciences (ICMHS), 5) The 6th International Conference for Accounting and Finance (ICAF), 6) The 2nd International Language and Education Conference (ILEC), 7) The 2nd International Conference on Nursing (ICONURS), 8) The International Conference on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE), 9) The 2nd International Conference of Agribusiness and Rural Development (IConARD), 10) The 10th International Conference on Public Organization (ICONPO), 11) The 2nd International Symposium on Social Humanities Education and Religious Sciences (ISHERSS), 12) The 5th Dental Research and Exhibition Meeting (DREAM), 13) The International Conference on Hospital Administration (ICHA), and 14) The 3rd International Conference on Sustainable Agriculture (ICoSA).

Accordingly, We are proud to announce that this year, the 4^{th} ICoSI 2020 breaks the Museum Rekor-Dunia Indonesia (MURI) record as the Virtual Multidisciplinary Conference with the Largest Number of Area of Fields in Indonesia

In addition, this year, this conference holds special value since this is the first conference in the history of our university where the entire conference is taking place remotely on a digital platform through the use of advance technologies due to the Covid-19 Pandemic.

I would take this opportunity to express my highest respect to the Rector of Universitas Muhammadiyah Yogyakarta, Dr. Gunawan Budiyanto who gave approval and ensured the maximal support from all the faculty members of Universitas Muhammadiyah Yogyakarta (UMY) that made this event a big success. In addition, my appreciation goes to all the support teams who have provided their valuable support and advice from planning, designing and executing the program.

Let me conclude my speech by encouraging the delegates to participate with an increasing number in all the activities and discussions through the digital platforms for the next two days. I wish everyone a successful, safe, and fruitful conference.

Thank you!

Wassalamu'alaikum Wr. Wb.

Yogyakarta, Indonesia, 14 October 2020

Inter atlor onferen on Sustrable



Welcoming Remarks by the Rector of Universitas Muhammadiyah Yogyakarta



Assoc. Prof. Dr. Gunawan Budiyanto

Innovation is the beginning of the development of technology, and technology is a development machine that is expected to provide benefits to humans and provide the smallest possible impact on environmental quality. In the concept of sustainable development, development must improve the quality of human life without causing ecological damage and maintain the carrying capacity of natural resources.

International Conference on Sustainable Innovation (ICoSI) is an international conference which is an annual conference held by the University of Muhammadiyah Yogyakarta (UMY), Indonesia. In 2020 this raises the issue of "Cutting-Edge Innovations on Sustainable Development Goals." Therefore, on behalf of all UMY academics, I would like to congratulate you on joining the conference, hoping that during the Covid-19 Pandemic, we can still provide suggestions and frameworks for achieving sustainable development goals.



About The 4th International Conference on Sustainable Innovation (ICoSI) 2020

Cutting Edge Innovations for Sustainable Development Goals

The 2030 Agenda for Sustainable Development is enacted by the United Nations as a shared blueprint for peace and prosperity for people and the planet, now and into the future. It consists of strategies to improve health and education, reduce inequality, and spur economic growth while also conserving natures by 2030.

This year, however, at the first one-third of its timeline, the SDG Reports shows that the outbreak of COVID-19 did hinder the achievement, or at least decelerate the progress of achieving the 17 goals. In fact, according to the report, "some number of people suffering from food insecurity was on the rise and dramatic levels of inequality persisted in all regions. Change was still not happening at the speed or scale required", accordingly.

Therefore, in this event of pandemic, the quantity and quality of research, innovation, and more importantly multi-disciplinary collaboration are indispensable. Furthermore, there needs to be clear ends of those works. That is how those research are applicable and benefits directly to the society. That is how those research is incorporated as the drivers of policy making, and used practically in the society. Hence, the stakeholders especially the triple helix of higher education institution, government, and industry must be re-comprehended and supported to reach the common goal of the SGD.

International Conference on Sustainable Innovation (ICoSI) has been essentially attempting to strengthen this regard since its first establishment. One of the goals of ICoSI is to provide primarily a platform where scholars, practitioners, and government could grasp the development and trends of research. Hopefully, meeting these actors altogether would result in stronger collaboration, sophisticated and advantageous research, and brighter ideas for further research. Based on these reasoning, this year, the 4th ICoSI 2020 UMY is themed 'Cutting-edge Innovations for Sustainable Development Goals".

Improving from last year conference which brought nine focal conference, this year ICoSI 2020 UMY brings 14 disciplines, from social sciences, natural sciences, and humanities. ICoSI 2020 received as much as 1005 papers. The paper works submitted in ICoSI 2020 UMY will be published in Atlantis Proceedings, IOP Proceedings, National/International Journals, and ICoSI ISBN-indexed Proceedings.

Nevertheless, ICoSI believes that publication is only the beginning of research dissemination. The publications will enhance the chance of the research known by wider audience, and then used, applied, and incorporated at either system, institutional, or personal level of human lives.





CONTENTS

CONTENIS	
The 4 th ICoSI 2020 Committees	2
Reviewers of 4 th ICoSI 2020	5
Preface by the Chairperson of the 4 th ICoSI 2020	
welcoming Remarks by the Rector of Universitas Munammadiyan Yogyakarta	9
About The 4 th International Conference on Sustainable Innovation (ICoSI) 2020	
CONTENTSTRACK ECONOMICS, LAW, EDUCATION, SOCIAL, AND HUMANITIES	
A Policy Analysis for Building Regulation in Disaster Situations on Sleman Regency	
Wisnu Dimas Punto Aji ^{1,*} Dewi Sekar Kencono ²	
Valuation of a Declining Oilfield under Stochastic Oil Prices and Non-Constant Interest Rates	
Fransiscus Pratikto ^{1,*} , Sapto Indratno ² , Kadarsah Suryadi ³ , Djoko Santoso ⁴	
The Dispute Board as an Alternative to the Construction Service Disputes Settlement	
Fadia Fitriyanti ^{1,*} Emil Adli ²	
The Promotion and Protection of Human Rights in Islam for Creating the Culture of Peace	
Martinus Sardi ^{1,*}	
Trusts Concept Settings in Management Limited Company	
Reni Anggriani ^{1,*} King Faisal ²	
Legal Protection of Nurses in Health Care Efforts During the co-pandemic Period 19	
Reny Suryanti ^{1,*} Nyoman Putra Putra ²	
Effect of Parenting against Smartphone Addiction	47
Mawaddah Nasution ^{1,*} , Siswanto Masruri ² , Khoiruddin Bashori ³	47
Model of Organizing Film Productio Amid the Covid-19 Outbreak in Indonesia	51
Citra Dewi Utami ^{1,*}	51
Accountability of Village Fund Allocation Management (ADD) in Village Government	
Mohamad Sukarno ^{1,*}	
Effect of Parenting against Moral Development of Children Aged 4-10 Years	
Widya Masitah ^{1,*} Asmadi Alsa ² Abd.Madjid ³	
The Influence of Family Communication on Children's Social Competence at SD Ar-Rahman Full Day Scho	
Medan	
Juli Maini Sitepu ^{1,*} Asmadi Alsa ² Abd.Madjid ³	
The Integration of Law and Religion for New Civilization in Indonesia	
Dewi Nurul Musjtari ^{1,*} Nurmawati ² Zola Fi Dinillah Halim ³	
Head of East Java Aisyiah Board Women's Empowerment Methods in Realizing Sustainable Development Di Indonesia	
Nur Azizah Hidayat ^{1,*} Iman Zukhrufi Nur Azzam ²	
Optimization of Child-Friendly City Development Policy in Yogyakarta City	
Septi Nur Wijayanti ^{1,*} Hanum Salsabila ²	
The Obligation of Indonesian Government to Ratify the Rome Statute for the Global Justice	
Muhammad Nur Islami ¹ , Martinus Sardi ²	
Legal Politics of Restoration of Indonesia's State Policy Post Amendment of the 1945 Constitution	
King Faisal Sulaiman ^{1,*}	
Competition Price Regulations in an Islamic Perspective: Determination of the Aircrat Ticket Tariff	
M. Tri Saputra ^{1,*} Mukti Fajar ND ²	
Romanticism Dyinamics of Legal Politics Protection and Management of Environmental Protection to Indon	
Ecocracy	
Al Qodar Purwo S ¹ , Nur Azizah Hidayat ² , Iman Zukhrufi Nur Azzam ³	116
Ambiguity of Environmental Economic Instruments between Ecological or Economic Interests, in Controlling	
Environmental Damage in Special Region of Yogyakarta	
Sunarno ¹ Arvin Setiyana Dewangga ²	
The Law Enforcement against a Non-Sharia Compliance Banking Transaction by the Financial Services Au	
in Indonesia	
Dewi Nurul Musitari ^{1,*} Nasrullah ² Aunurochim Mas'ad ³ Nurmawati ⁴	130



Shariah Audit Expectation-Performance Gap in Malaysian Islamic Banks	. 137
Supiah Salleh ¹ , Mustafa Mohd Hanefah ² , Zurina Shafii ³	
Students' Attitudes towards Blended Learning Implementation in a private university of Yogyakarta	
Avita Elok Faiqoh¹, Eko Purwanti²	. 144
How Millenial Think About Privacy Concern?	
Anissa Hakim Purwantini1 [*] Betari Maharani ¹	
Impact Of Changes in Psak on the Competence of Lecturers and Students Understanding Levels	. 157
Duwi Rahayu ^{1,*} Imelda Dian Rahmawati ^{1,*} Bayu Hari Prasojo ¹	. 157
The Influence of Internal Locus of Control, Idealism, Ethical Knowledge, and Gender on Accounting Students	s '
Ethical Perception	. 167
Aji Baskoro ^{1,*} Dyah Ekari Sekar Jatiningsih ¹	. 167
Effect of Net Income, Rupiah Exchange Rate, Interest Rate dan Inflation on Stock Price	. 174
Edon Ramdani ^{1,*} Zehan Nur Apsah ²	. 174
A Comparative Analysis on the Recognition of Zakat in the Taxation Systems of Malaysia and Indonesia	. 187
Suhaila Abdul Hamid ^{1,*} Icuk Rangga Bawono ^{2,*} Ayu Ratu Wulandari ²	. 187
Developing an Environmental Tax Framework for Malaysia:	. 192
Izlawanie Muhammad ^{1,*} Norfakhirah Nazihah Mohd Hasnu ²	
Determining Factors for Success Use of E-Learning in Learning Process in College	. 196
Mohammad Alfian ^{1,*} Hikmatul Maulidah ²	
Effect Of Money Ethics And The Use Of Siskeudes On The Level Of Fraud In Village Fund Management Witl	
Religiosity As A Moderation Variable	
Elisa Purwitasari ^{1,*} Mohammad Alfian ^{1,*} M. Sofyan Firman Syah ^{1,*}	
The Relationship between Performance Based Budgeting Implementation, Budget Absorption, Accountability	
Local Government Performance	
Parwoto ^{1,*}	
The Influence of Information Technology (IT) on Accrual Accounting Adoption of the Jordanian Public Sector	. 217
Moawiah Awad Alghizzawi ^{1,*} Rosnia Masruki ¹	
The Effect of Professional Skeptisism, Auditor Expertise, and Integrity of Audit Quality	
Ruci Arizanda Rahayu ^{1,*} Sarwenda Biduri ^{1,*} Mahardika D. Kusuma Wardana ^{1,*}	
E-Procurement and Effectiveness of Internal Controls on Fraud Prevention	
Sarwenda Biduri ^{1,*} Wiwit Hariyanto1 ^{,*} Ilmi Usrotin ¹	
Usefulness of Accounting Information in Predicting Hedging Decision	
Sustari Alamsyah ^{1,*} Triana Zuhrotun Aulia ¹	
Religious Belief & Halal Cosmetic Products Consumption	
[*] Tanti Handriana ¹ , Praptini Yulianti ² , Ryan Bayu Permana ³	
Does Corporate Social Responsibility Disclosure Affect Profit Sharing Ratio?	
Veni Soraya Dewi ^{1,*} Friztina Anisa ^{1,*} Faqiatul Mariya Waharini ¹	
Determination Analysis Affecting Intellectual Capital Disclosure and Its Effect on Market Performance and Co	
Equity Capital	
Wawan Sadtyo Nugroho ^{1,*} Nia Kurniati Bachtiar ¹	
TRACK HEALTH AND NURSING SCIENCE	
The Effect of Assertive Behaviour Therapy towards Bullying Behavior in Adolescents	
Chindy Maria Orizani ^{1,*} , Dwi Yuniar Ramadhani ²	
Characteristics and Level of Knowledge of Newborn Baby Care in Pandemic Covid 19	
Devita Elsanti ^{1,*} , Diyah Yulistika Handayani ²	
Risk factors for disease severity in paediatric patients with Covid-19: A literature review	
Eka Oktavianto ¹ , Gani Apriningtyas Budiyati ² , I Made Moh. Yanuar Saifudin ^{3,*} , Endar Timiyatun ⁴ , Aris	00
Setyawan ⁵	. 269
The Role of Self-Efficacy and Family Support in Improving the Quality Of Life of Patients with Hypertension	
Erni Tri Indarti ^{1,*} , Oktaffrastya Widhamurti ² , Remita Yuli Kusumaningrum ³	
The Influence of Head Nurses Supervision on Discharge Planning Completeness	
Etik Kustiati ^{1,*} Vivi Yosafianti Pohan ²	
Lemon and Rose Aromatherapy Reduce Blood Pressure in Preeclampsia during Pregnancy	
Etika Purnama Sari ^{1,*} , Dewi Andriani ²	



Phenomenology of Acceptance Process and Self Concept Changes of the Hernia Post-Surgery Clients in	
Kebumen Regency, Central Java Indonesia	
Ike Mardiati Agustin ¹ , Doni Kurniawan ² , Sawiji ³	
The Role of Family Support to Medication, Diet and Activity of Diabetic Patients	
Indah Wulandari ^{1,*} Kusnanto ^{2,} Sony Wibisono ^{3,} Dwi Abdul Aziz ⁴	
The Effectiveness ff Giving Fe Tablet in Increasing Hemoglobin Levels in Adolescent at Vocational School of	
Swadaya Temanggung	297
Halimah Sarjiyati ¹ , Luluk Rosida ^{2,*}	
The Effect of Passive Physiotherapy on Hemodynamic Status of Patients with Head Injury: A Literature Rev	
Ni Luh Seri Astuti ¹ , I Made Moh. Yanuar Saifudin ^{2,7,*} , Novida Prima Wijayanti ³ , Marsha Yoke Nancy ⁴ , Ahn	
Firdaus ⁵ , Sri Setiyorini ⁶	
The Effectiveness of Cognitive Behaviour Therapy towards Hallucination Intensity in Skizofrenia Patients	
Noviana Ayu Ardika ^{1,*} , Mohammad Fatkhul Mubin ²	312
The Effect of Tuberculosis Event on the Self-Concept of Positive Pulmonary Tuberculosis and Negative	
Pulmonary Tuberculosis	
Nurbaiti ¹ , Meynur Rohmah ^{2,*}	
An Overview of the Implementation of IMCI in Primary Health Community of Bantul and Yogyakarta City	
Rahmah ^{1,*}	
The Influence of Cervical Cancer Education on Cervical Cancer Prevention Behaviour in Women of Childbe	_
Age: a Literature Review	
Riska Putri Miharja ¹ , Enny Fitriahadi ^{2,*}	
Family Support for Type 2 DM Patients in Controlling Blood Sugar levels in Kebonsari Surabaya	
Rusdianingseh ^{1,*} Difran Nobel Bistara ²	
Relationship Family Support with Menstrual Hygiene Behavior in Early Adolescents	
Julita Kartrikasari Eka Pratiwi ¹ , Sarwinanti ^{2,*}	
Risk Factors of Stunting: A Literature Review	
Sholihah Gustavia Yolanda ^{1,*} Ellyda Rizki Wijhati ²	
Analysis of Education and Family Income Factors on Caregiver Burden in Elderly Care at Community Health	
Center of Perak Timur	
Siti Aisyah ^{1,*} , Gita Marini ²	345
Polyclinic in Nganjuk Regional Hospital	250
Sony Wahyu Tri Cahyono ^{1,*} , Laili Indana Lazulva ² , Indah Permatasari ³	
Anti-Cancer Activity of Ants Nest Plant (<i>Myrmecodia Pendans Merr. & Perry</i>) on Protein Transduction Signa	
Resistance Complex CDK-2-Cyclin-E and NF-Kb: Silico Molecular Docking Study	
Ana Medawati ^{1,*} , Supriatno ² , Sofia Mubarika ³ , Sitarina Widyarini ⁴	
Black Triangle Treatment with Non Surgeryaesthetic Restoration (Case Report)	
Any Setyawati 1,*	
The Effect of Rosella Flower Tea Solution Onto Discoloration of Plate Heat Cured Acrylic Resin Base	
Fransiska Nuning Kusmawati ^{1,*} Tabitha Nurul Arifa ²	
Management of Dental Mobility with Combinations of Splinting And Jacket Crown	
Hartanti ^{1,*}	
Dental Service Time in the Implementation of Indonesia National Health Insurance Based on the Highest De	
Treatments At Primary Care	
Iwan Dewanto ^{1,*} Sharon Sesita Frinces ²	
The Oral Hygiene Level Of Dentistry School Female Students Using Fixed Orthodontics	
Muhammad Shulchan Ardiansyah ^{1,*} Rizki Adzhani Nur Shabrina ²	
Radix Anchor Post as Intracanal Retention in Porcelain Fused Metal Crown Restoration	
Nia Wijayanti ^{1,*}	
Correlation between Dental Behavior and Dental Caries Status (DMF-T) of Pendul Community Sedayu Dist	
Bantul Yogyakarta	
Novitasari Ratna Astuti ^{1,*}	
	385
Interaction on Sustantial Innovation	e



Nyka Dwi Febria ^{1,*} , Mora Claramitha ² , Widyandana ³	. 385
Halal and Tayyib is The New Life Style of Food Consumption in Achieving Sustainable Development Goals Arif Pujiyono ^{1,*}	. 389 . 389
Entrance and Exit Wound in Gunshot Death Cases at Forensic and Medicolegal Installation of Dr. Soetomo	
Hospital in 2019: Case Study	. 392
Desy Martha Panjaitan ^{1,*} , Ahmad Yudianto ² , Ariyanto Wibowo ³	. 392
Measuring Urban Self-Payers' WTP for the JKN-KIS Health Insurance: A Choice-Based Conjoint Approach	
Fransiscus Rian Pratikto ^{1,*} Rika Teddy ²	
Level of Lipoprotein (a) as A Predictive Factor for Coronary Thrombus	
lin Novita Nurhidayati Mahmuda ^{1,*}	
The Influence of Health Education (Health Promotion) Breast Self Examination (BSE) Against Behavior of BS (Knowledge, Attitudes, and Action) Student of Madrasah Aliyah Ar-Raudlatul Ilmiyah Islamic Boarding School	l
Kertosono in Early Detection of Breast Cancer	
Lina Nur Hidayahtur Rohmah ¹ , Nurma Yuliyanasari ² , Musa Ghufron ³ , Muhammad Anas ^{4,*}	
Case Report: Misdiagnosis Case Of Nasopharyngeal Carcinoma in Patient with Chronic Rhinosinusitis: Famil	
Doctors Awareness is Essential	
Oke Kadarullah ^{1,*}	
The Effectiveness of Iler Leaf (Plectranthus Scutellarioides [L.] R.Br. Folium) on the Healing Process (Diamet	
Of Burn Injury Grade II A on White Mouse <i>(Rattus Norvegicus)</i> Wistar Strain	
Influence of Body Height on Central Motor Conduction Time Using Transcranial Magnetic Stimulation	
Yetty Hambarsari ^{1,*} , Priyanka Ganesa Utami², Rivan Danuaji³, Baarid Luqman Hamidi⁴, Subandi⁵, Sulistya	ni ⁶
The Effect of <i>Phoenix Dactylifera Pollen</i> on Histology Liver of <i>Rattus norvegicus</i> Exposed with Air Fresheners Yuningtyaswari ^{1,*} , Mega Silviana Dewi ²	s419
Comparison of Dominant and Non-Dominant Hemisphere Cortical Excitability Using Transcranial Magnetic	
Stimulation	. 425
Yetty Hambarsari ^{1,*} Baarid Lugman Hamidi ² , Riyan Danuaii ³ , Priyanka Ganesa Utami ⁴ , Sulistyani ⁵ ,	. 425





TRACK ECONOMICS, LAW, EDUCATION, SOCIAL, AND HUMANITIES





Effect of Net Income, Rupiah Exchange Rate, Interest Rate dan Inflation on Stock Price

Edon Ramdani^{1,*} Zehan Nur Apsah²

ABSTRACT

The level of the stock price can judge the company performance incorporated in a stock exchange. Stock prices which tend to be stable, increased and not too fluctuated show that the company's performance is very good and becomes the choice of investors in investing their capital. Various factors influenced stock price performance grouped into primary factors, fundamental factors and technical factors. One fundamental factor is macroeconomic conditions such as exchange rates, interest rates and inflation. From previous studies, various macroeconomic variables can affect the stock prices movement while some other studies show the opposite. Based on these conditions, the researcher tried to reexamine the level of influence of these macroeconomic variables on stock prices, especially in the food and beverages sector manufacturing companies listed on the Stock Exchange in the 2014-2017 period. In addition, the researcher also includes the net income variable as part of the technical factors that become the test variable in this study. Based on tests conducted using quantitative analysis with the regression method, the results show that net income has a significant effect on stock prices while the rupiah exchange rate, interest rates and inflation have no significant effect on stock prices.

Keywords: Stock Price, Performance, Fundamental Factors, Technical Factors And Macroeconomic Variables

INTRODUCTION

One factor that can measure the companies performance incorporated in the capital market is the company's stock price on the stock exchange. An outstanding company performance is reflected in the level of stock prices that grows to be stable and increased in the stock exchange floor. Stock prices which run to be stable do not fluctuate too much and get to increase their movements to be one of the pull factors for investors when deciding to invest their capital. Various factors influence the rise and fall of stock prices. Economists classify these factors into two primary factors, fundamental factors and technical factors. These two factors are what shares investors want to have, and when to conduct transactions. It is possible to state that it is not the most influential, but usually the fundamental factors are used to determine what stocks you want to buy. For technical is to determine when you want to sell and enter.

Fundamental analysis is useful to determine the condition of the company, by studying matters relating to the basic conditions (fundamentals) of a company, both quantitatively (financially), and qualitatively (nonfinancial). Considering by looking at the fundamental factors is often called as the top down analysis. The analysis is starting from looking at macroeconomic

developments, considering the prospect of the sector or industry, and estimating the future performance of the company.

- 1. Macroeconomic conditions, such as
- 1. Interest rates, inflation, currency exchange rates
- 2. Economic growth
- 3. Political stability
- 2. Sectoral / industrial growth
- 3. Fundamental companies
- 1. Management / management of the company
- 2. Financial performance
- 4. Calculate the fair value, aka the intrinsic value of a stock.

Then, there are 6 important financial ratios in fundamental analysis

- 1. Earning per share (EPS) = net income: number of shares
- 2. Price to earnings ratio (PER) = Share Price: Earnings per Share (EPS)

¹ Universitas Pendidikan Indonesia, Indonesia

² Universitas Pamulang, Indonesia

^{*}Corresponding author. Email: edon_ramdani@yahoo.com



- 3. Price to book value (PBV) = Stock Price: Book Value per Share (BV)
 - 4. Return on equity (ROE) = Net Profit: Net Wealth
- 5. Dividend yield (DY) = Dividend per Share: Share Price
- 6. Debt to equity ratio (DER) = Total debt: Net Wealth (Own Capital).

Furthermore, the technical analysis does not look at performance, but historical data on stock prices. It is about chart form that can reflect all, whether the stock has support or resistance, cheap or expensive. This analysis is also used to predict future stock price movements. Fundamental and technical factors are used as quantitative analysis to find out previous data about interest rates, economic variables and stock values. This analysis is important for investors to make investment decisions in stocks.

For some cases of shares, the two analysis above sometimes do not work, because the driving force is 'bandar' or 'fried stock.' If stocks fall into this category, both technical and fundamental analysis are useless. It usually occurs in low-cost stocks and with small capitalists. As explained earlier that the fundamental factor is a very important factor in analyzing stock prices where one of the important elements for fundamental factor analysis is the macroeconomic condition, then also the company's performance factor reflected in the profits generated.

In previous studies conducted by several researchers showed various conditions and effects of macroeconomic variables on stock prices, such as research conducted by Eldomiaty, Saeed, Hammam and Soud (2018). They concluded that the associations between stock prices, inflation rates, and interest rates were still persistent, and suggested that there was a negative relationship / influence between the inflation rate and stock prices, while the relationship between interest rates and stock prices had a positive effect. This research was conducted at companies outside the financial industry registered with DJIA30 and NASDAQ100 from 1999 to 2016.

Sukruoglu and Nalin (2013) in "The Macroeconomic Determinants of Stock Market Development in Selected European Countries: Dynamic Panel Data Analysis", revealed that there was a negative relationship between inflation rates and the growth of the stock market, but in another study by Sukruoglu and Nalin found that there was a positive relationship between the level of income and the growth of the stock market. In their research, Sukruoglu and Nalin used panel dynamic data with the study period from 1995 to 2015.

Makan, Chandni, Ahuja, Kaur, Chauhan and Saakshi (2012) in "A Study of the Effect of Macroeconomic Variables on Stock Market: Indian Perspective", their

study used macroeconomic variables include industrial production index, the index of public purchasing power, interest rates, exchange rates, gold prices, oil prices and foreign investment. Based on their research, from the seven macroeconomic variables, only three variables had the effect of a positive relationship with stock prices, the exchange rate, foreign investment and interest rates, while other variables do not have a significant or negative effect. This research was conducted in five sectors / industries, steel industry, vehicles, capital goods, FMCG and durable goods with research data from April 2005 to March 2012.

Research conducted by Arfaoui and Rejeb (2017) in Gold, US Dollar and Stock Market Interdependencies: A Global Analytical Insight", suggested that there was a positive relationship between world oil prices, gold prices, US dollar prices and US interest rates on stock prices. In their research, Arfaoui and Rejeb used global (international) data from 1995 to 2015. A study conducted by Hunjra, Imran, Ijaz and colleagues (2014) about "Impact of Dividend Policy, Earning Per Share, Return on Equity, Profit After Tax on Stock Price", carried out on sixty-three companies (excluding financial companies) listed on the Karachi stock exchange. Their research revealed that profit after tax had a significant effect on stock prices. Research conducted by Eldomiaty, Saeed and Hammam, and Soud (2018), the associations between stock prices, inflation rates, interest rates were still persistent. Empirical evidence from the stock duration model, suggested based on the Johansen panel, there was a positive relationship between inflation with stock prices, but its regression analysis found no positive relationship between inflation rates and stock prices. Then research conducted by Gopal and Munusamy (2016), "Causal Relationship between Gold, Crude Oil & US Dollar Rates and S&P BSE 100 in India: An Experimental Study", suggested that there was a strong relationship between macroeconomic variables with Indian stock prices Stock Market.

Based on the previous studies, the researches are interested in re-examining the effect of net income, the rupiah exchange rate, interest rates and inflation on stock prices, where the difference in this study is the researchers examined together "The Effect of Net Profit, Rupiah Exchange Rates, Interest Rates and Inflation of Share Prices with the object of research in the Food & Beverages Sub Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in the 2014-2017 Period".

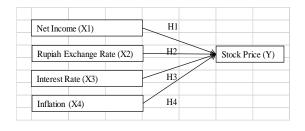
CONCEPTUAL FRAMEWORK

Based on the results of previous researches, there are several variables that affect the value of the company, which still show different results and even contradictory between one research and another. Those issues are



raised to be a gap of this research. The following is a model of thinking about the effect of net income, the exchange rate of the rupiah, interest rates and inflation on stock prices.

Based on this framework, the researcher formulated the research hypothesis:



- H1: There is a significant effect of net income on stock prices
- H2: There is a significant effect of exchange rates on stock prices
- H3: There is a significant influence of interest rates on stock prices.
- H4: There is a significant effect of inflation on stock prices.

The hypothesis is a temporary answer formulated for the research problem, where the research problem formulation has been stated in the form of sentence questions.

RESEARCH AND METHODOLOGY

This study examined the relationship between the independent variable (X) and the dependent variable (Y). The research used causal research. This study aimed to analyze the relationship between one variable with another variable and how the influence between these variables, how much the independent variable affects the dependent variable. This study was to explain the effect of net income (X1), the rupiah exchange rate (X2), interest rates (X3), and inflation (X4) as an independent variable with stock prices (Y) as the dependent variable. The research method used descriptive quantitative methods with quantitative data sourced from secondary data taken from the Indonesia Stock Exchange, the Central Statistics Agency, the Company's Financial Statements and Bank Indonesia.

Data collection techniques used direct recording method in the form of time series data, through annual data records contained on the IDX, Bank Indonesia and BPS. The population and sample of this study were companies listed in the Indonesia Stock Exchange, which were food and beverages manufacturing companies from

2014 to 2017. According to Sugiyono (2017: 81), the sample is part of the number and characteristics possessed by the population. The sample selection method used purposive sampling, which is the method of selecting objects with certain criteria. The intended criteria are:

- 1. Food and beverage sector manufacturing companies listed on the IDX during 2014-2017
- 2. Companies that issue financial statements in Rupiah
- 3. Companies that close the book year ends on December 31
- 4. Companies that issue financial statements for 4 years in a row
 - 5. Companies that do not experience losses every year

Table 1

The List of Companies as Population of the Research

No	Stock	Issuer's name	
	Code		
1	AISA	Tiga Pilar Sejahtera Food Tbk	
2	ALTO	Tri Banyan Tirta Tbk	
3	CEKA	Wilmar Cahaya Indonesia Tbk	
4	DLTA	Delta Djakarta Tbk	
5	ICBP	Indofood CBP Sukses Makmur Tbk	
6	INDF	Indofood Sukses Makmur Tbk	
7	MLBI	Multi Bintang Indonesia Tbk	
8	MYOR	Mayora IndahTbk	
9	PSDN	Prasidha Aneka Niaga Tbk	
10	ROTI	Nippon Indosari Corpindo Tbk	
11	SKBM	Sekar Bumi Tbk	
12	SKLT	Sekar Laut Tbk	
13	STTP	Siantar Top Tbk	
14	ULTJ	Ultrajaya Mild Industry & Tading Co. Tbk	
15	CAMP	PT. Campina Ice Cream Industry Tbk	
16	PCAR	Prima Cakrawala Abadi Tbk	
17	HOKI	Buyung Poetra Sembada Tbk	
18	CLEO	Sariguna Primatirtha Tbk	



Table 2The Operational Variables

Variable	Variable Concept	Indicator/Measure ment	Scale
Net Income(X 1)	Net Income is excess income from expenses in the process of generatin g income	December 31 starting in 2014- 2017. Net profit = profit before income taxes	Ratio
Rupiah exchange rate (X ₂)	Exchange rate is the price of a foreign currency expressed in the currency of the country of origin	Rupiah / US \$ exchange rates per year end 31 December starting in 2014-201. Middle rate = (Sell rate + Buy rate): 2	Ratio
Interest Rate (X ₃)	Interest rate is the annual interest payment from a loan, in the form of a percentag e of the loan got from the amount of interest received each year divided by the number of loans	The percentage unit (%) uses January-December data averaged to obtain the BI rate for the 2014-2017 period	Ratio
Inflation	Inflation is an	Inflation is the average annual data	Ratio

	in prices of goods that are general and continuo us (Rahardja and Manurun g, 2015,201 6)	Indonesia (BI) for the 2014-2017 period	
Stock Price(X ₅)	Stock Price is the value of shares that occur because of trading on the secondar y market	The Share Price is from the share price at the end of December 31 with the 2014-2017 time period going public on the IDX	Ratio n

Analysis Method

The analysis technique of this study used the SPSS computer program version 21.00 for Windows. Before testing hypotheses by using multiple regression analysis, the four research variables classic assumption tests were performed which included normality tests, autocorrelation tests, heteroscedasticity tests and multicollinearity tests. Those tests were intended to interprete the results appropriately and efficiently.

Descriptive Statistics

The descriptive statistics presentation aimed to see the profile of the research data. In this study, the variables used net income, rupiah exchange rate, interest rates, inflation and stock prices.

Classic Assumption Test

In this study, the classic assumption tests were the normality test, the multicollinearity test, the heteroscedasticity test, and the autocorrelation test. The explanation of each classic assumption test were:

1. Normality Test

Normality test was to find out whether the data collected from each dependent and independent variable or both have normal distribution or not. The study used two normality test methods,:

a. Kolmogorov-Smirnov. If the Kolmogorov-Smirnov test results show a p-value greater than 0.05, then the data is normally distributed and



vice versa, if the p-value is less than 0.05, then the data is not normally distributed.

b. Histogram, the data must be spread evenly to almost all normal curve areas following the bell-shape liner to be distributed normally.

2. Heteroscedasticity Test

According to Ghozali (2016: heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. Heteroscedasticity occurs when confounding variance does not have the same variance for all observations, resulting in an inefficient interpretation of regression. If the variance from one observation residual to another observation remains, then it is called homoscedasticity. If it is different, it is called heteroscedasticity. A good regression model is homoscedasticity heteroscedasticity does not occur. Most of the crosssectional data contain heteroscedasticity situations because this data collects data representing various sizes (small, medium and large). Detection of the presence or absence of heteroscedasticity can be executed by looking at the presence or absence of certain patterns in the scatter plot graph between SRESID and ZPRED where the Y axis is the predicted Y axis and the X axis is the residual (predicted Y - actually Y) that has been studentized. The basis for the decision is made by looking at the scatterplot:

a. If there are certain patterns, such as dots that have formed certain patterns that are regular (wavy, widened and then narrowed), then indicating heteroscedasticity has occurred.

b. If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity.

3. Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). To detect the presence or absence of multicollinearity can be seen from the value of tolerance and its opponents and from the Variance Inflation Factor (VIF). Both measures show which each independent variable is explained by other independent variables. If the tolerance value is above 10% and the VIF is below 10, it concludes that the regression model is free from multicollinearity.

4. Autocorrelation Test

According to Ghozali (2016: 106), the autocorrelation test aims to test whether in a linear regression model there is a correlation between the disturbance error in a period t with an error in the period t-1 (previous). If there is a correlation, then it is called an autocorrelation problem.

Autocorrelation arises because sequential observations over time are related to each other.

Hypothesis test

Hypothesis testing is used to determine the amount of contribution and influence of independent variables on the dependent variable. Hypothesis testing of this study used multiple linear regression method because it has four independent variables and one dependent variable. Multiple linear regression analysis is a basic analysis that has a technical pattern and substance that is almost the same as a simple linear regression analysis. This regression model was selected to predict the value of the dependent variable if the value of the independent variable has increased or decreased and to find out the relationship direction between the independent variables net income, the rupiah exchange rate, interest rates and inflation with the dependent variable that is whether the stock price is positive or negative.

The analytical model used in this study is the multiple linear regression analysis model. Multiple linear regression analysis is intended to test the extent and how the direction of independent variables affect the dependent

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + e$$

Information:

Y = Stock Price

 α = Constant

 β = Regression Coefficient

X1 = Net Profit Free Variable

X2 = Free Variable Rupiah Exchange Rate

X3 = Interest-Free Variable

X4 = Inflation-Free Variable

e = error

The testing method for the proposed hypothesis is carried out through partial testing and simultaneous testing and analysis of the coefficient of determination according to Ghozali (2016), testing the hypothesis:

T test

The t test statistic shows how far the influence of one independent variable in explaining the dependent variable variation. Besides, it is used to determine the effect of the independent variable on the dependent variable partially with a significance level is 0.05.

The acceptance or rejection of the hypothesis in the t test is based on the following criteria:

1. If the significance value \leq 0.05, it means that the independent variable affects the dependent variable.



2. If the significance value ≥ 0.05 , it means that the independent variable does not affect the dependent variable.

Coefficient of Determination (R^2)

The coefficient of determination R2 essentially measures how far the model's ability to explain the independent variables variation. The coefficient of determination is 0 (zero) and 1 (one). A small R2 value means that the ability of the independent variables to explain the dependent variable variation is very limited. If R2 is equal to 0, then the independent variable has no effect on the dependent variable and if R2 approaches the numbers, then the independent variable has a perfect effect on the dependent variable. The coefficient of determination is between zero and one. A value close to one means that the independent variable provides almost all the information needed to predict the dependent variable. If the value of R 2 is 1, it means that the independent variable can explain the fluctuation of the dependent variable and there are no R2 values range from 0 to 1. If approaching 1 means that the stronger the ability of independent variables can explain the dependent variable. In contrast, if the value of R ² approaches the number 0 means the weaker the ability of the independent variable to explain the dependent variable fluctuation.

RESULTS AND DISCUSSION

Population of this study was food and beverage companies listed in the Indonesia Stock Exchange (IDX) for the 2014-2017 period. The first step taken was determining the sample by purposive sampling or with various considerations. Total population in this study was eighteen companies. The results of purposive sampling obtained eleven companies as final samples with forty-four financial statements for four years with the sample details:

Table 3Sample Selection Criteria

No	Criteria	Violation	Accumulation
1	Food and beverages sector manufacturing companies listed on the Indonesia Stock Exchange during 2014-2017	0	18
2	Companies that issue	0	18

	financial statements in rupiah		
3	The company that closed the book year ended on December 31	0	18
4	A company that publishes financial statements for 4 years in a row	(6)	12
5	Companies that do not experience losses every year	(1)	11

Source: Secondary data, 2020

Eleven companies that met the research criteria were companies with financial statements not incurred for four years and had completed research variables:

Table 4Research Samples

No	Stock Code	Issuer's name	
1	CEKA	Wilmar Cahaya Indonesia Tbk	
2	DLTA	Delta Djakarta Tbk	
3	ICBP	Indofood CBP Sukses Makmur Tbk	
4	INDF	Indofood Sukses Makmur Tbk	
5	MLBI	Multi Bintang Indonesia Tbk	
6	MYOR	Mayora IndahTbk	
7	ROTI	Nippon Indosari Corpindo Tbk	
8	SKBM	Sekar Bumi Tbk	
9	SKLT	Sekar Laut Tbk	
10	STTP	Siantar Top Tbk	
11	ULTJ	Ultrajaya Mild Industry & Tading Co. Tbk	

Source: Secondary data, 2020

Descriptive Statistical Analysis

Descriptive statistical analysis was to find out descriptive data. This analysis was conducted by looking at the maximum, minimum, average (mean) and standard



deviation of a data. Given the number of samples (N) 44 company data, the variables studied were net income, the rupiah exchange rate, interest rates and inflation as the independent variable (X) and stock prices as the dependent variable (Y). Descriptive statistical testing that provides a statistical description of variables in this study. The results of testing these descriptive variables as seen in table 5 below:

Table 5Results of Descriptive Statistical Analysis

Var iabl es	N	Minim um	Maxim um	Mean	Std. Deviation
Net Inco me	4 4	16855 97311 3.0	526690 600000 0.0	1042682 744790.5 70	1522761 688422.2 600
Rup iah Exc han ge Rat e	4 4	12240	13795	13304.75	521.846
Inte rest Rat e	4 4	0.0425	0.0775	0.065000	0.013966
Infl atio n	4 4	0.0302	0.0836	0.045850	0.022148
Sto ck Pric e	4 4	300.0	390000. 0	14082.22 7	58304.01 39
Val id (list wis e)	4 4				

Source: Output results of SPSS 21, 2020

Based on the results of table 5 shows the descriptiv statistics of the variables used in the study with the amount of data for each variable is 44:

- 1. The share price has an average of 14082,227
- 2. Net income has a maximum value of 5266906000000.0 owned by Indofood Sukses Makmur Tbk
- 3. The rupiah exchange rate has an average value of 13304.75

- 4. The minimum value of the interest rate is 0.0425
- 5. Inflation has an average of 0.045850

Research Result

Classic Assumption Test

To use the regression model, this study produces an appropriate parametric value, the data must first met four classic assumption tests. The classic assumption test is administered and the results are:

Normality test

This normality test aims to test whether a research regression model, both the dependent variable and other variables, has normal data distribution or not. A good regression model is a research model that has data normally distributed or close to normal. The normality test in this study also uses the Kolmogorov-Smirnov (K-S) non-parametric statistical test model. Decision making is to determine whether the data is normally distributed or not:

- 1. Asymp Value. Sig (2-tailed)> 0.05 then the data is normally distributed
- 2. Asymp Value. Sig (2-tailed) <0.05 then the data is not normally distributed.

Tabel 6

Results of One-Sampel Kolmogorov-Smirnov

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		44
Normal	Mean	,0000000
Parameters ^{a,b}	Std. Deviation	56080,73924820
Most	Absolute	,387
Extreme	Positive	,387
Differences	Negative	-,228
Kolmogorov-S	2,567	
Asymp. Sig. (2	tailed)	,000

- a. Test distribution is Normal.
- b. Calculated from data.

Source: Output results of SPSS 21, 2020

9 786237 054436

Table 7

Kolmogorov-Smirnov One-Sample Test Results After Transformation

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	
N		44	
Normal Parameters ^{a,b}	Mean	,0000000	
	Std. Deviation	,42678331	
Most	Absolute	,121	
Extreme Differences	Positive	,121	
	Negative	-,087	
Kolmogoro	v-Smirnov Z	,801	
Asymp. Sig	Asymp. Sig. (2-tailed)		

- a. Test distribution is Normal.
- b. Calculated from data.

Source: Output results of SPSS 21, 2020

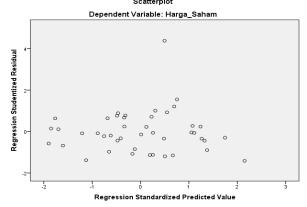
The Kolmogorov-Smirnov One-Sample test results in table 6 above shows the Asymp value. Sig of 0,000. Because the P value (Asymp.Sig.) is smaller than the 0.05 significance level, it can be concluded that the residual data in this regression model is not normally distributed. The regression model does not meet the normality assumption. However, the researchers performed data transformation using SPSS version 21, so that the data in the Kolmogorov-Smirnov One-Sample test became normal data, and the results got by the researchers after the data transformation are:

After transforming abnormal data, asymp values. Sig iss 0.542. It can be concluded that the residual data in this regression model is normally distributed because the significance level is greater than 0.05.

Heteroscedasticity test

Heteroscedasticity test aims to determine whether in each regression model has similarities or differences in variance from one observation to another observation. The method uses observation to scatterplotchart. If there is no clear pattern (spread points above and below zero on the y axis, then there is no Heteroscedasticity) according to Ghozali (2016: 138). Based on Figure 7, it can be concluded that there is no Heteroscedasticity. This is based on graphic images where the points in the graph does not form clear patterns and these points are spread out above and below the number 0 on the Y axis.

Besides using scatterplot charts, this study also uses a



glacier test to be more sure that there is no symptoms of Heteroscedasticity.

Table 8Glacier Test Results

Coefficients^a

Model	Unstandardiz ed Coefficients		Standardiz ed Coefficien ts	t	Sig.
	В	Std Error	Beta		
1 (constan t)	3.60 6	32.01 0		- 0.11 3	0.91
Net Income	0.03	0.63	0.79	0.52 1	0.60 5
Rupiah Exchan ge Rate	1.10 4	8.004	0.063	0.13 8	0.89
Interest Rate	0.18	0.476	0.064	0.38 4	0.70 3
Inflatio n	0.58 5	0.786	0.344	0.74 4	0.46 1

a. Dependent Variable: ABS-RES

Source: Output results of SPSS 21, 2020

Glacier Test Results

From the results of the data above show that there is no single independent variable that significantly affect the dependent variable with absolute value. This can be seen from the significance value of each independent variable that is above 0.05. So it can be concluded that the regression model does not contain heteroscedasticity.



Multicollinearity Test Results

The multicollinearity test aims to find out whether in the regression model there is a correlation between the independent variables. To find out whether there is multicollinearity seen from the value of tolerance and variance inflation factor (VIF). Both measurements indicate that each independent variable is explained by other independent variables. A regression model said to be free from multicollinearity is if the tolerance value is above 0.10 and VIF is below 10. The results of multicollinearity testing were in the following table:

Table 9Multicollinearity Test Results

Mod el	Unstardize Coeff nts	d	Standa rdized Coeffi cients Beta	Т	Si g.	Colline y Statis Toler anoe	
1 (cons tant)	- 20. 146	47. 600		- 0. 42 3	0. 67 4		
Net Inco me	0.5 47	0.0 93	0.673	5. 84 8	0. 00 0	0.99	1. 00 7
Rupi ah Exch ange Rate	4.7 03	11. 902	0.137	0. 39 5	0. 69 5	0.10 9	9. 14 4
Inter est Rate	0.4 01	0.7 08	0.701	0. 07 1	0. 56 6	0.84 4	1. 18 5
Inflat ion	1.1 24	1.1 68	0.336	0. 96 2	0. 34 2	0.10 8	9. 25 9

a. Dependent Variable: Stock_Price

Table 9 shows that there are no variables that have a VIF of over 10 and the tolerance value is not smaller than 0.1 in the regression model testing the net profit tolerance value 0.993> 0.1 and VIF 1.007 <10, the tolerance value of the rupiah exchange rate 0.109> 0.1 and VIF 9,144 <10, interest rate tolerance 0,844> 0,1 and VIF 1,185 <10, inflation tolerance values 0,108> 0,1 and VIF 9,259 <10, Based on these data, it can be concluded that there is no multicollinearity problem. This meant that there is

no relationship between the independent variables used in the regression model of this study.

Autocorrelation Test Results

The autocorrelation test aims to test whether in a smooth regression model there is a correlation between sample members ordered by time. This assumption deviation usually appears in observations that use time series. To diagnose the autocorrelation existence in a regression model was through testing the value of Durbin Watson. The autocorrelation test output is on the following table:

Table 10Autocorrelation Test Results

Mod	R	R	Adjuste	Std.	Durbi
el		Squar	d R	Error	n-
		e	Square	of the	Watso
				Estimat	n
				e	
1	0.69	0.487	0.434	44814	1.303

a. Predictors: (Constant), Inflation_,Net_Income, Interest_Rate, Rupiah_Exchange_Rate

b. Dependent Variable: Stock_Price

Table 10 shows the results of the autocorrelation test where the Durbin-Watson number in the data regression model was 1.303. This data ranges from - 4 to 4. This means that there is no problem in the research regression model that is there is no correlation between the interruption error in the period t, so this regression equation is feasible to use.

Hypothesis testing

Multiple Linear Regression Analysis

Hypothesis testing in this study is carried out by using multiple regression analysis (multiple regression analysis), which is through the coefficient of determination test, statistical test t and statistical test f. This multiple linear regression analysis is to examine the effect of net income, the rupiah exchange rate, interest rates and inflation on stock prices.

With the statistical equation above, alternative hypotheses are accepted with a significance level of 0.05. If the significance level of the analysis results is more than 0.05, the research hypothesis is accepted. However, if the significance level of the analysis results is no more than 0.05, the research hypothesis is rejected.

Table 11

Multilinier Regression Analysis Results



Mod el	Unstanda rdized Coefficie nts		rdized rdized Coeffi cients		Si g.	Colinearity Statistics	
		Err or				anoe	F
(Con stant)	- 20. 146	47. 600		- 0. 42 3	0. 67 4		
Net Inco me	0.5 47	0.9	0.673	58 48	0. 00 0	0.99	1. 00 7
Rupi ah Exch ange Rate	4.7 03	11. 902	0.137	0. 39 5	0. 69 5	0.10 9	9. 14 4
Inter est Rate	0.4 01	0.7 08	0.071	0. 56 6	0. 57 4	0.84 4	1. 18 5
Inflat ion	1.1 24	1.1 68	0.336	0. 96 2	0. 34 2	0.10 8	9. 25 9
a. Dependet Variable: Stock_Prices							

Obtained multiple linear regression equation as follows:

$$Y = -20,146 + 0,547 X1 + 4,703 X2 + 0,401 X3 + 1,124 X4$$

Based on the regression equation above, it can be analyzed the effect of each independent variable on stock prices, namely:

1. Constants

When net income, the rupiah exchange rate, interest rates and inflation were in a constant and constant condition, the value of the company was -20,146. Assuming other factors were considered constant or zero.

2. Net Profit

The net profit regression coefficient was 0.547 and positive. This showed that every 1% increased in net income would cause an increase in the value of the company received by 0.547.

3. Rupiah Exchange Rate

The regression coefficient of the rupiah exchange rate was 4.703 and positive. This showed that every 1%

increased of the rupiah exchange rate would cause an increase in the value of the company received by 4,703.

4. Interest Rates

Interest rate regression coefficient was 0.401 and positive. This showed that every 1% increased in interest rates would cause an increase in the value of the company received by 0.401.

5. Inflation

The inflation regression coefficient was 1.124 and positive. This showed that every 1% increased in inflation would cause an increase in the value of the company received by 1,124

Test Results of Partial Significance (t Test)

The t-test statistic is to show how far the influence of an individual independent variable individually in explaining the dependent variable Ghozali in Suyati (2015). The purpose of this test is to find out whether there is a partial effect (alone) given the independent variable (X) on the dependent variable (Y). Regression testing used is a two-way test (two held test) using tcount. Hypothesis testing is to compare the value of tcount with ttable and sig. value with a.

- 1. If the value of sig <0.05 or $t_{count}>t_{table}$ then there is the effect of variable X on the variable Y.
- 2. And if the value of sig> 0.05 or t _{arithmetic} <t _{table} then there is no effect of the variable X on the variable Y.

To find out the significant results of the t test, the researchers conducted a test using the IBM SPSS 21 application. The results of the significance could be seen at the table below and conclusions drawn by completing the conditions so that the hypothesis of the effect of net income, the rupiah exchange rate, interest rates and inflation on prices stock can be proved.

Table 12

T Test Results

Coefficients^a

Model	Unstandardiz ed Coefficients		Standardiz ed Coefficien ts	t	Sig.
	В	Std. Error	Beta		
1 (Consta nt)	- 20.14 6	47.60 0		- 0.42 3	- 0.67 4
Net Income	0.547	0.093	0.673	5.84 8	0.00

Rupiah Exchang e Rate	4703	1190 2	0.137	0.39 5	0.69
Interest Rate	0.401	0.708	0.071	0.56 6	0.57 4
Inflation	1.124	1.168	0.336	0.96 2	342

a. Dependent Variable: Stock_Price

Source: Output Results of SPSS 21, 2020

Based on the test results in table 12 above, the conclusions can be drawn:

1. Net profit on stock prices

After t-test using SPSS 21, based on table 4.10 explains that for the net income variable the significance value is obtained 0,000 less than 0.05 or 0,000 <0.05 and the calculated value of 5.848 is greater than the table of 2.023 or 5.848> 2.023. So it can be concluded that net income has a significant positive effect on stock prices.

2. The exchange rate of the rupiah against stock prices

After t-test using SPSS 21, based on table 4.10 explains that for the rupiah exchange rate variable obtained a significance value of 0.695 is greater than 0.05 or 0.695> 0.05 and a calculated value of 0.395 is smaller than the table of 2.023 or 0.395 <2.023. So it can be concluded that the rupiah exchange rate does not have a significant positive effect on stock prices.

3. Interest rates on stock prices

After t-test using SPSS 21, based on table 4.10 explains that for the variable interest rates got significance value of 0.574 is greater than 0.05 or 0.574> 0.05 and the value of t is 0.566 smaller than the table of 2.023 or 0.566 <2.023. So it can be concluded that interest rates do not have a significant positive effect on stock prices.

4.Inflation on stock prices

After t-test using SPSS 21, based on table 4.10 explains that for the inflation variable got a significance value of 0.342 is greater than 0.05 or 0.342> 0.05 and a calculated value of 0.962 is smaller than the table of 2.023 or 0.962 <2.023. So it can be concluded that inflation has no significant positive effect on stock prices.

Determination Coefficient Test Results (R2)

The coefficient of determination in linear regression is often interpreted as how much the ability of all independent variables in explaining the variance of the dependent variable. In a simple determinant coefficient is calculated by squaring the relation coefficient (R). The coefficient of determination aims to find out what percentage of the influence given by variable X

simultaneously on the variable Y. The coefficient of determination R^2 test is used to find out how much influence the independent variable has on the dependent variable. In this research, the independent variable is net income, rupiah exchange rate, interest rate and inflation with the dependent variable which is stock price. The results of the coefficient of determination test are presented on the table below.

$$\label{eq:continuous_problem} \begin{split} & \textbf{Table 13} \\ & \textbf{Determinant Coefficients } (R^2) \ \textbf{Test Results} \\ & \textbf{Model Summary}^b \end{split}$$

Mo	R	R	Adju	Std.	Dur
del		Squar	sted R	Error of	bin-
		e	Square	the	Watson
				Estimat	
				e	
1	0.6	0.	0.43	0.44	1.30
	98	487	4	814	3

a. Predictors: (Constant). Inflation_, Net_Income, Interest_Rate, Rupiah_Exchange_Rate

b. Dependent Variabl: Stock_Prices

Source: Output Results of SPSS 21, 2020

In table 13 shows the coefficient of determination R^2 of 0.487 or 48.7%. This means the variable net income, the rupiah exchange rate, interest rates and inflation can explain that 48.7% of the share price variable. While the rest of (100% -48.7% = 51.3%) is explained by other factors not included in the regression analysis in this study. Based on the output of the SPSS 21 program above it is known that the R Square value of 0.487. This implies that the influence of variables X1, X2, X3, X4 simultaneously on the Y variable is 48.7%.

Discussion Of Results And Discussion

Effect of Net Income on Share Prices

Hypothesis 1 (H1) in this study is to test whether net income affects stock prices. The results of the regression showed a t value of 5.848 with a significance value of 0.000 <0.05. So it can be concluded that hypothesis 1 is accepted, Ho is accepted, in which Net Income has a positive effect on Stock Prices. Based on the results of testing hypothesis one, it is known that net income has a significant effect on stock prices. This result can not be separated from the higher stock prices that will attract investors to invest their capital, investors will think that the company is good. Therefore, net income has the involvement and role of control over improving the company's ability to attract investors to invest in the company.

Effect of Rupiah Exchange Rates on Share Prices



Hypothesis 2 (H2) in this study is to test whether the rupiah exchange rate affects stock prices. The results of the regression showed a t value of 0.395 with a significance value of 0.695> 0.05. So it can be concluded that hypothesis 2 is rejected, Ho is accepted, in which Rupiah Exchange Rates do not affect the Stock Price.

Effect of Interest Rates on Share Prices

Hypothesis 3 (H3) in this study is to examine whether interest rates affect stock prices. The results of the regression showed a t value of 0.566 with a significance value of 0.574> 0.05. So it can be concluded that hypothesis 3 is rejected, in which interest rates have no effect on stock prices. The absence of significant influence indicates that the size of Indonesia's interest rates does not have a big impact on the fluctuation of stock prices. This is because the type of investor in Indonesia is an investor who likes to conduct stock transactions in the short term, so that investors tend to take profit taking with the hope of getting a high enough capital again in the capital market.

Influence of Inflation on Stock Prices

Hypothesis 4 (H4) in this study is to examine whether inflation affects stock prices. The results of the regression showed a t value of 0.962 with a significance value of 0.342> 0.05. So it can be concluded that hypothesis 4 is rejected in whichinflation has no effect on Stock Prices. No significant effect on inflation on stock prices because inflation in this research period is in the category of mild inflation because inflation that occurs is less than 10%. Inflation with a growth rate that takes place slowly and is in the position of one digit or under 10% which means relatively stable and controlled.

CONCLUSION

The purpose of this study is to obtain empirical evidence about the effect of net income, the exchange rate of the rupiah, interest rates and inflation on stock prices. Based on the results of the analysis and discussion that has been carried out using multiple regression processed with the SPSS version 21 program, it can be concluded that based on the partial t test; it is known that net income influences stock prices while the rupiah exchange rate, interest rates and inflation have no positive effect on stock prices in the food and beverages sub sector manufacturing companies listed on the Indonesia Stock Exchange in 2014 - 2017.

Limitation

This study has limitations that can affect the ultimate results of this study, which includes; the criteria for companies that generate positive profits in four consecutive years (years of observation) are also a limitation in this study because this results in the results of the study that cannot be generalized. This study only uses variables regarding net income, the rupiah exchange

rate, interest rates, and inflation that affect stock prices. If further research uses more variables, the outcome may change. This can be seen from the coefficient of determination (adjusted R Square) in this study, which is relatively low. So there are still many variables that affect stock prices in the future.

Suggestion

Based on the discussion and conclusions obtained, researchers provide suggestions for improvement in further research as follows:

- 1. For further researchers, it is expected to be able to conduct research in more than one company sector involved in the research in order to be able to compare the effect of research variables on each sector.
 - 2. It can add variables to enrich further researches.
- 3. Future studies are expected to use the latest observation year period with a longer time span than this research to get better conclusions from previous studies.

REFERENCES

- [1] [1] Deniz Sukruoglu, Halime Temel Nalin (2013), The Macroecomonic Determinants of Stock Market Development in Selected European Countries: Dynamic Panel Data Analysis, International Journal of Economics and Finance; Vol. 6, No. 3; 2014 ISSN 1916-971X E-ISSN 1916-9728 Published by Canadian Center of Science and Education
- [2] Ghozali. (2016). Multivariete Analysis Application with the IBM SPSS Program. Semarang: Diponegoro University Publisher Agency
- [3] Gopal, Jothi Munusamy (2016), Causal Relationship between Gold, Crude Oil & US Dollar Rates and S&P BSE 100 in India: An Experimental Study, International Journal of Financial Management, Volume 6 Issue 2 April 2016
- [4] Hakkı Öztürk, Tolun A. Karabulut (2017), The Relationship between Earnings-to-Price, Current Ratio, Profit Margin and Return: An Empirical Analysis on Istanbul Stock Exchange, Accounting and Finance Research Vol. 7, No. 1; 2018, ISSN 1927-5986 E-ISSN 1927-5994
- [5] Hunjra, Ahmed Imran, Ijaz and friends (2014), Impact of Deviden Policy, Earning Per Share, Return on Equity, Profit After Tax on Stock Price, International Jurnal of Economics and Empirical Research (IJEER), 2014, Vol.2, issue 3, 109-115
- [6] Indonesian Stock Exchange, Listed Financial and Annual Reports.



- From(http://www.idx.co.id/id/beranda/perusahaant ercatat/laporankeuangandantahunan.aspx).
- [7] Makan, Chandni, Ahuja, Avneet Kaur, Chauhan and Saakshi (2012) "A Study of the Effect of MacroeconomicVariables on Stock Market: Indian Perspective", Online at https://mpra.ub.unimuenchen.de/43313/ MPRA Paper No. 43313, posted 18 Dec 2012 13:11 UTC
- [8] Mongi Arfaoui dan Aymen Ben Rejeb (2017), Oil, Gold, US Dollar dan Stock Market Interdependencies: A Global Analytical Insight, European Journal of Management and Business Economics Vol. 26 No. 3, 2017 pp. 278-293 Emerald Publishing Limited 2444-8451 DOI 10.1108/EJMBE-10-2017-016. www.emeraldinsight.com/2444-8451.htm
- [9] Ramin Cooper Maysami, Lee Chuin Howe and Mohamad Atkin Hamzah (2004), Relationship between Macroeconomic Variables and Stock Market Indices: Cointegration Evidence from Stock Exchange of Singapore's All-S Sector Indices, Jurnal Pengurusan 24(2004) 47-77.
- [10] Tarek Eldomiaty, Yasmeen Saeed, Rasha Hammam, Salma Aboul Soud (2018), The associations between stock prices, inflation rates, interest rates are still persistent, Journal of Economics, Finance and Administrative Science Emerald Publishing Limited 2077-1886 DOI 10.1108/JEFAS-10-2018-0105