# DAFTAR PUSTAKA

Abdullah, F., & Siswanti, T. (2019). Pengaruh perputaran kas dan perputaran persediaan terhadap profitabilitas (study empiris perusahaan manufaktur sektor makanan dan minuman yang terdaftar di BEI periode 2014-2017). Jurnal Bisnis Dan Akuntansi Unsurya, 4(1), 1–14. <https://doi.org/10.35968/jbau.v4i1.259>

Aini, N., Trisakti, D., Rahman, A., Hidayati, K., Surabaya, U. B., Kas, P., & Piutang, P. (2021). *UBHARA Accounting Journal*. *1*(November), 290–299.https://journal.febubhara-sby.org/uaj/index

Alifiandi, Randy, and Nurjanti Takarini. 2020. “Nalisis Profitabilitas Pada Perusahaan Food and Beverages Yang Terdaftar Di Bursa Efek Indonesia Tahun 2015-2018”. *IDEI: Jurnal Ekonomi & Bisnis* 1(2):76-83, doi:10.38076/ideijeb.vli2.9.

Aniqotunnafiah, A., Yulianto, H., & ... (2023). Pengaruh Perputaran Modal Kerja, Perputaran Piutang, Perputaran Persediaan, Perputaran Kas Terhadap Profitabilitas Perusahaan Manufaktur Subsektor Makanan …Pengaruh Perputaran Modal Kerja, Perputaran Piutang, Perputaran Persediaan, Perputaran Kas Terhadap. *Journal Of Business …*, *4*. http://journal.univetbantara.ac.id/index.php/jbfe/article/view/3778%0Ahttp://journal.univetbantara.ac.id/index.php/jbfe/article/viewFile/3778/1910

Arianti, R., & Rusnaeni, N. (2018). Pengaruh Perputaran Piutang, Perputaran Kas, dan Perputaran Persediaan terhadap Profitabilitas pada PT. Ultrajaya Milk Industry & Trading Company, Tbk. *Ekonomia*, *6*(2), 266–271. https://core.ac.uk/download/pdf/337610579.pdf

Ariestia, S., & Sihombing, T. (2021). Pengaruh Audit Opinion, Audit Tenure, Dan Profitabilitas Terhadap Audit Delay Dengan Reputasi Kantor Akuntan Publik(Kap) Sebagai Variabel Moderasi. *Jurakunman (Jurnal Akuntansi Dan Manajemen)*, *14*(1), 26. https://doi.org/10.48042/jurakunman.v14i1.59

Ayu, I. G., Istri, P., Santhi, W., Ketut, S., & Dewi, S. (2013). Pengaruh Manajemen Modal Kerja Terhadap Tingkat Profitabilitas Pada Perusahaan Makanan dan Minuman Yang Terdatar Di Bursa Efek Indonesia Periode 2010-2013 *Fakultas Ekonomi dan Bisnis Universitas Udayana ( Unud ), Bali , Indonesia Fakultas Ekonomi dan Bis. 3522–3539*. https://www.unud.ac.id/in/fakultas6-Fakultas%20Ekonomi%20dan%20Bisnis.html

Bambang, Riyanto. 2001. Dasar-Dasar Pembelanjaan Perusahaan. Yogyakarta. BPFE.

 Bangun, N. (2018). Pengaruh Perputaran Persediaan, Perputaran Piutang Dan Modal Intelektual Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia (Bei) Periode 2014 – 2016 (Penelitian Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di B. *Jurnal Ekonomi*, *23*(2), 226–239. <https://doi.org/10.24912/je.v23i2.370>

Brigham, Eugene F dan Houston, Joel. 2009.Fundamentals of Financial Management. Tenth Edition. Cengage Learning Asin Pte Ltd

Cahyani, R. A., & Sitohang, S. (2012). Pengaruh Perputaran Modal Kerja , Likuiditas , Dan Solvabilitas Terhadap Profitabilitas. *Jurnal Ilmu dan Riset Manajemen.* https://doi.org/10.35384/jemp.v9i3.452

Damayanti, D. (2021). Analisis Kinerja Keuangan Menggunakan Rasio Profitabilitas pada PT Bank Rakyat Indonesia (Persero) Tbk. Tahun 2018 – 2020. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi (JIMMBA)*, *3*(4), 738–746. https://doi.org/10.32639/jimmba.v3i4.936

Dewi, Kadek Agustia, I Wayan Suhendra, Fridayana Yudiaatmaja. 2016. Pengaruh Perputaran Kas, Perputaran Piutang, dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Manufaktur di Bursa Efek Indonesia Tahun 2014. *E-Journal Bisma Universitas Pendidikan Ganesha Jurusan Manajemen. Volume 4.* https://ejournal.undiksha.ac.id/index.php/JMI/article/view/6698

Dwi Prastowo & Rifka Julianty. 2005. Analiasa Laporan Keuangan Konsep dan Aplikasi. Yogyakarta : Akademi Perusahaan YPKN Farah

Dyckman, Thomas R., Roland E. Dukes, Charles J. Davis, 2000. Akuntansi Intermediate, Edisi Ketiga, Jilid 1, Erlangga, Jakarta. Erlina,

Dr. Muhammad Ramdhan, S.Pd., M. . (2021). *Metode Penelitian* (Aidil Amin Effendy (ed.)). 2021.

Ekel Hagana Sinuhaji1, Theo Batara Tarigan2, Agnes Anjeli3, Ike Rukmana Sari4, D. A. H. (2023). The effect of working capital turnover, inventory turnover, cash turnover and accounts receivable turnover on profitability in basic industry and chemicals companies on the indonesian stock exchange for the period 2017-2021. 7, 786–794. :*Journal of Economic, Business and Accounting.* http://eprints.unm.ac.id/30153/1/The\_Effect\_of\_Working\_Capital\_TurnoveA

Faozani, Mulyatini, N., & Hermina, E. (2020). Pengaruh Modal Kerja Dan Perputaran Piutang Terhadap Profitabilitas (Studi Pada Perusahaan PT Kimia Farma Tbk yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2007-2017). *Business Management and Entrepreneurship Journal*, *2*(1), 142–154. https://jurnal.unigal.ac.id/bmej/article/view/2632

Firmansyah, D. I., & Riduwan, A. (2021). Pengaruh Perputaran Modal Kerja, Leverage, dan Likuiditas terhadap Profitabilitas. *Jurnal Ilmu Dan Riset Akuntansi*, *10*(2), 1–18. http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/3815#

Fuady, R. T., & Rahmawati, I. (2019). Pengaruh Perputaran Kas, Perputaran Piutang, dan Perputaran Persediaan Terhadap Profitabilitas (Studi Kasus pada Perusahaan Makanan dan Minuman yang Terdaftar di BEI Tahun 2012-2016). *Jurnal Ilmiah Binaniaga*, *14*(1), 51. https://doi.org/10.33062/jib.v14i1.306

Ghozali, I. (2011). Aplikasi Analisis Multivariate dengan program SPSS. Semarang: Badan Penerbit Universitas Diponegoro.

Ghozali, I. (2013). Aplikasi Analisis Multivariate dengan Program SPSS (7 ed.). Semarang: Badan Penerbit Universitas Diponegoro.

Ghozali, I. (2016). Aplikasi Analisis Multivariate dengan Program IBM SPSS 23. In (Edisi 8). Semarang: Badan Penerbit Universitas Diponegoro.

Ghozali, I. (2018). Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25 (2018th Ed.). Semarang:Badan Penerbit Universitas Diponegoro.

Hanafi M. M. 2016. Manajemen Keuangan Edisi 2. Yogyakarta: BPFE.

Sitorus Harangan, Nina Purnasari, I. W. dan N. U. (2023). Pengaruh Perputaran Piutang,Perputaran Persediaan,Struktur Aktiva,Dan Pertumbuhan Penjualan Terhadap Profitabilitas Pada Perusahaan Consumer Goods Industry Yang Terdaftar Di Bursa Efek Indonesia Tahun *2018- 2021*. *7*(2), 892–903. *Journal of Economic, Business and Accounting* https://doi.org/10.31539/costing.v7i1

Manullang, H. C., Sihombing, T. P., & Lestari, I. (2023). *P*engaruh Perputaran Kas , Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Sub Sektor Rokok. *3*, 4933–4943. *Journal Of Social Science Research* https://j-innovative.org/index.php/Innovative

Hery. (2017). Akuntansi Aktiva, Hutang, Dan Modal.

Ita Dwi Fitriana, A. W. R. D. (2020). *281-Article Text-669-1-10-20200922.* Pengaruh Perputaran Kas, Perputaran Piutang, Dan Perputaran Persediaan Terhadap Profitabilitas, September, 309–317. http://dx.doi.org/10.24912/je.v25i2.670

Jama’an. (2008). Pengaruh Mekanisme Corporate Governance dan Kualitas Kantor Akuntan Publik Terhadap Integritas Informasi Laporan Keuangan(Studi Pada Perusahaan Publik di BEI). *Tesis. Universitas Diponegoro.* http://eprints.undip.ac.id/17940/

Karamina, R. A., & Soekotjo, H. (2018). Pengaruh Perputaran Modal Kerja, Perputaran Kas, Perputaran Persediaan, Dan Perputaran Piutang Terhadap Profitabilitas. *Jurnal Ilmu Dan Riset Manajemen*, *7*(3), 1–20. http://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/431

Kasmir. 2012. Analisis Laporan Keuangan. Jakarta: PT. Raja Grafindo Persada.

Kasmir,“Analisis Laporan Keuangan”, Penerbit Rajawali Pers : Jakarta, 2014.

Kasmir. 2015. Analisis Laporan Keuangan. Rajawali Pers. Jakarta.

Kasmir. 2017. Analisis Laporan Keuangan. Jakarta: Rajawali Pers. Lazaridis.

Kasmir. (2019). Analisis Laporan Keuangan (I1 ed). Jakarta: Raja Grafindo Persada.

Kustinah, S., & Indriawati, W. (2022). Pengaruh Perputaran Persediaan Dan Perputaran Piutang Terhadap Profitabilitas Pada Unit Usaha Toserba Koperasi PT LEN Bandung. Star, 14(1), 13. <https://doi.org/10.55916/jsar.v14i1.32>.

Manullang, H. C., Sihombing, T. P., & Lestari, I. (2023). Pengaruh Perputaran Kas , Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Sub Sektor Rokok. *3*, 4933–4943. https://doi.org/10.31004/innovative.v3i4.3134

Masruroh, Siti, Emmy Ermawati dan Muhaimin Dimyati. 2018. Pengaruh Perputaran Piutang, Pertumbuhan Penjualan dan Perputaran Persediaan Terhadap Profitabilitas Perusahaan Industri Barang Konsumsi yang Terdaftar di Bursa Efek Indonesia. J*urnal Riset Akuntansi . Volume 1. Nomor 2.* https://jkm.itbwigalumajang.ac.id/index.php/jra/article/view/81

Munawir. 2010. Analisa Laporan Keuangan. Yogyakarta : Liberty.

 Nirawati, L., Samsudin, A., Stifanie, A., Setianingrum, M. D., Syahputra, M. R., Khrisnawati, N. N., & Saputri., Y. A. (2022). Profitabilitas dalam perusahaan. *Jurnal Manajemen Dan Bisnis*, *5*(1), 60–68. https://doi.org/10.37673/jmb.v5i1.1623

Norita, Ike. 2019. Pengaruh Modal Kerja dan Perputaran piutang terhadap profitabilitas pada Perusahaan Industri Tekstil dan Garment di Bursa Efek Indonesia Tahun 2014-2018. Tesis Universitas Islam Negeri Sulthan Thaha Saifuddin Jambi. *Universitas Islam Negeri Sulthan Thaha Saifuddin Jambi.* https://jurnal.unigal.ac.id/bmej/article/view/2632

 Pratiwi, D. (2015). Pengaruh Perputaran Modal Kerja, Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Industri Barang Konsumsi Di Bursa Efek Indonesia. *Manajemen Dewantara*, *1*(1), 1–8. https://doi.org/10.32502/jimn.v7i1.1022

Pratiwi, Dini. 2016. Pengaruh Perputaran Modal Kerja, Perputaran Piutang dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Industri Barang Konsumsi di Bursa Efek Indonesia. *Jurnal STIE Serelo Lahat.* https://doi.org/10.32502/jimn.v7i1.1022

Putra, S. A., & Wahyuni, D. U. (2021). Pengaruh Ukuran Perusahaan, Leverage, Dan Profitabilitas Terhadap Nilai Perusahaan Semen Di Bursa Efek Indonesia (BEI). *Jurnal Akuntansi Dan Manajemen*, *8*, 1–18. http://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/4022

Putri, S. M., Susanti, D., & Padang, U. N. (2023). Pengaruh Profitabilitas , Struktur Aset dan Risiko Bisnis Terhadap Struktur Modal ( Studi Pada Perusahaan Sub Sektor Tekstil dan Garmen yang Terdaftar di Bursa Efek Indonesia ) Universitas Negeri Padang Abstract*: This study purpose is to decide the profi*. *02*(1), 280–288. https://doi.org/10.24036/jsn.v2i1.102

Purwatiningtias, Indah Risky. 2019. Pengaruh Perputaran Modal Kerja, Perputaran Kas, Perputaran Piutang, dan Perputaran Persediaan Terhadap Profitabilitas Perusahaan (Studi Pada Perusahaan Manufaktur Subsektor Tekstil dan Garment yang terdaftar pada Bursa Efek Indonesia periode 2014-2018). S*kripsi Fakultas Ekonomi Universitas Pancasakti Tegal.* https://repository.upstegal.ac.id/id/eprint/963

Qotimah, K., Kalangi, L., & Korompis, C. (2023). Pengaruh Analisa Fundamental Terhadap Return Investasi Pada Saham Second Liner Di Sektor Energi Periode 2019-2022 Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal EMBA : Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *11*(3), 12–26. https://doi.org/10.35794/emba.v11i3.48797

Raharjaputra, Hendra S (2009). Buku Panduan Praktis : Manajemen Keuangan dan Akuntansi Untuk Eksekutif Perusahaan, Jakarta : Salemba Empat.

Rahayu, N. A., & Chairiyaton. (2022). Pengaruh modal kerja terhadap profitabilitas pada perusahaan go publik di bursa efek indonesia tahun 2017-2021. *Fair Value : Jurnal Ilmiah Akuntansi Dan Keuangan*, *14*(2), 5654–5661. https://journal.ikopin.ac.id/index.php/fairvalue

Rahmanita, R., Hizazi, A., & Rahayu, R. (2023). Pengaruh Perputaran Piutang, Perputaran Persediaan Dan Perputaran Aktiva Tetap Terhadap Profitabilitas Pada Perusahaan Makanan Dan Minuman Tahun 2017-2021. *Jurnal Lentera Bisnis*, *12*(3), 755. https://doi.org/10.34127/jrlab.v12i3.797

Riyanto, Bambang. 2010. Dasar-Dasar Pembelanjaan Perusahaan. Edisi 4. Yogyakarta: BPFE.

Riyanto, Bambang. (2008). Dasar-dasar Pembelanjaan Perusahaan. Yogyakarta: Penerbit GPFE.

Sari, Eka Purnama, D. (2020). Piutang Terhadap Profitabilitas. Pengaruh Perputaran Persediaan Dan Perputaran Piutang Terhadap Profitabilitas, *2*(1), 36–47. http://dx.doi.org/10.22303/accumulated.2.1.2020.35-46

Sari, Ni Made Vironika & Budiasih, I G.A.N (2014). “Pengaruh Debt To Equity Ratio, Firm Size, Inventory Turnover Dan Assets Turnover Pada Profitabilitas”. *E-Jurnal Akuntansi Universitas Udayana, 261-273*. https://jurnal.harianregional.com/akuntansi/id-7930

Sartono, A.2010. Manajemen keuangan. Yogyakarta: BPFE.

Sitohang, Y. (2023). Evaluasi Sistem Pengendalian Intern Persediaan pada PT. Pos Indonesia (Persero) Binjai. *Repository.Usu.Ac.Id*, *2*(4). http://repository.usu.ac.id/handle/123456789/22055

Sudana, I. M. (2011). Manajemen Keuangan Perusahaan. Jakarta: Erlangga.

Sugiyono. 2017. Metode Penelitian Kombinasi. Bandung: Alfabeta.

Sugiono. (2018). *Metode Penelitian.* Bandung: Alfabeta.

Suliyanto. (2018). *Metode Penelitian Bisnis untuk Skripsi, Tesis & Disertasi.* Purwokerto: Andi Offset.

Sunyoto, D. (2013). Metode Penelitian Akuntansi. Bandung: PT Refika Aditama.

Sulastri dan Misra. (2022). Pengaruh Perputaran Piutang Dan Struktur Hutang Terhadap Profitabilitas Pada Perusahaan Tekstil Dan Garment Yang Terdaftar Di Bursa Efek Indonesia Tahun 2014 – 2020. *Ekonomi Bisnis*, *28*(1), 60–70. https://ejournal.unis.ac.id/index.php/JEB/article/view/2503

Syafda Widiani Putri1, Yulistia2, S. (2021). Pengaruh Perputaran Modal Kerja dan Perputaran Persediaan Terhadap Profitabilitas Perusahaan Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia. *Journal of Applied Managerial Accounting*, *5*(2), 67–77. https://doi.org/10.30871/jama.v5i2.2693

Theo Genki Matondang1, Kerismawati Buulolo2, Leni Priska Manurung3, Friska Darnawaty Sitorus4olume, A. (2022). Pengaruh perputaran modal kerja, rasio lancar, dan total asset turnover (tato), debt rasio terhadap profitabilitas pada perusahaan manufaktur yang terdaftar di bursa efek indonesia periode 2016-2019. *5*, 1348–1355.<https://doi.org/10.31539/costing.v5i2.3363>

Veronica Reimeinda1, Sri Murni2, I. S. (2016). Analisis pengaruh modal kerja terhadap profitabiltas pada industri telekomunikasi di Indonesia. *Jurnal Berkala Ilmiah Efisiensi, 16(03), 207–218*. https://ejournal.unsrat.ac.id/v2/index.php/jbie/article/view/13230

Wati, Ayu Ambar, Budiman Slamet dan Ellyn Octavianty. 2019. Pengaruh Perputaran Piutang, Struktur Modal dan Ukuran Perusahaan Terhadap Profitabilitas (Pada Perusahaan Subsektor Otomotif Dan Komponen Yang Terdaftar di Bursa Efek Indonesia Tahun 2013-2017). *Jurnal Akuntansi Fakultas Ekonomi Universitas Pakuan.* https://jom.unpak.ac.id/index.php/akuntansi/article/view/1525

Wicaksono, G. (2016). Analisis Pengaruh Perputaran Modal Kerja, Likuiditas, Perputaran Aset Lancar, Dan Kas Berbanding Total Aktiva Terhadap Profitabilitas. *UNEJ E-Proceeding*, 384–397. http://jurnal.unej.ac.id/index.php/prosiding/article/view/3679

<https://www.cnbcindonesia.com/market/20191003123029-17-104139/duh-emiten-tekstil-terpukul-harga-saham-anjlok>

<https://cwts.ugm.ac.id/2023/01/02/phk-massal-industri-garmen-dan-tekstil-indonesia-pemerintah-harus-apa/>

<https://www.theindonesianinstitute.com/sembilan-pabrik-tekstil-tutup-ekonom-bukan-karena-produk-impor/>

# LAMPIRAN

Lampiran 1 Hasil Perhitungan Perputaran Persediaan Periode 2019-2023

Harga pokok penjualan

Rata-rata persediaan

Perputaran Persediaan =

| **Kode Saham** | **Tahun** | **Harga Pokok Penjualan** | **Rata-Rata Persediaan** | **Jumlah** |
| --- | --- | --- | --- | --- |
| ARGO     | 2019 | (304,423,038,130) | 85,555,942,038 | -3.558175281 |
| 2020 | (75,341,664,710) | 85,555,942,039 | -0.880612882 |
| 2021 | (108,798,067,270) | 85,555,942,039 | -1.271659977 |
| 2022 | (90,023,762,884) | 85,555,942,039 | -1.052221047 |
| 2023 | (64,997,884,470) | 85,555,942,040 | -0.759712101 |
| BATA     | 2019 | (502,693,372) | 264,472,100 | -1.900742543 |
| 2020 | (361,651,349) | 264,472,100 | -1.367446128 |
| 2021 | (242,719,799) | 264,472,100 | -0.917752001 |
| 2022 | (383,431,014) | 264,472,100 | -1.449797593 |
| 2023 | (296,840,335) | 264,472,100 | -1.122388089 |
| BELL     | 2019 | 509,360,697,332 | 165,705,029,281 | 3.073900047 |
| 2020 | 411,576,072,447 | 165,705,029,281 | 2.483787452 |
| 2021 | 307,788,071,414 | 165,705,029,281 | 1.857445563 |
| 2022 | 321,513,228,521 | 165,705,029,281 | 1.940274414 |
| 2023 | 374,397,863,496 | 165,705,029,281 | 2.259423659 |
| CNTX     | 2019 | (421,180,150,560) | 111,101,093,294 | -3.79096315 |
| 2020 | (227,620,787,580) | 111,101,093,294 | -2.048771806 |
| 2021 | (375,160,414,440) | 111,101,093,294 | -3.376748179 |
| 2022 | (528,073,299,680) | 111,101,093,294 | -4.753088237 |
| 2023 | (404,308,361,100) | 111,101,093,294 | -3.639103353 |
| ERTX     | 2019 | 1,271,613,793,550 | 385,798,687,304 | 3.296055262 |
| 2020 | 1,128,544,365,970 | 385,798,687,304 | 2.925215671 |
| 2021 | 1,409,527,808,940 | 385,798,687,304 | 3.653531895 |
| 2022 | 1,613,325,132,350 | 385,798,687,304 | 4.181779735 |
| 2023 | 1,765,115,215,730 | 385,798,687,304 | 4.575223488 |
| ESTI     | 2019 | (340,950,992,540) | 891,729,937,484 | -0.382347814 |
| 2020 | (255,887,915,260) | 891,729,937,484 | -0.286956739 |
| 2021 | (418,546,268,710) | 891,729,937,484 | -0.469364379 |
| 2022 | (404,019,482,690) | 891,729,937,484 | -0.453073813 |
| 2023 | (297,418,210,830) | 891,729,937,484 | -0.333529467 |
| HDTX   | 2019 | (51,798,306) | 11,871,870 | -4.363112635 |
| 2020 | (53,525,678) | 11,871,870 | -4.508613891 |
| 2021 | (52,658,671) | 11,871,870 | -4.435583526 |
|    | 2022 | (38,514,349) | 11,871,870 | -3.244168695 |
| 2023 | (29,508,584) | 11,871,870 | -2.485588538 |
| HRTA     | 2019 | (2,919,727,588,456) | 1,504,654,042,234 | -1.94046439 |
| 2020 | (3,716,928,485,410) | 1,504,654,042,234 | -2.470287775 |
| 2021 | (4,665,326,852,371) | 1,504,654,042,234 | -3.100597693 |
| 2022 | (6,175,631,540,633) | 1,504,654,042,234 | -4.104353139 |
| 2023 | (11,910,293,090,365) | 1,504,654,042,234 | -7.915635592 |
| INDR     | 2019 | (11,726,400,966,650) | 2,781,155,921,398 | -4.216376679 |
| 2020 | (9,032,334,223,400) | 2,781,155,921,398 | -3.247690701 |
| 2021 | (12,227,697,858,880) | 2,781,155,921,398 | -4.396624355 |
| 2022 | (13,864,903,952,270) | 2,781,155,921,398 | -4.985302638 |
| 2023 | (13,076,846,389,280) | 2,781,155,921,398 | -4.701946514 |
| INOV     | 2019 | (402,648,938) | 136,915,051 | -2.940866874 |
| 2020 | (427,898,412) | 136,915,051 | -3.125283954 |
| 2021 | (499,526,385) | 136,915,051 | -3.648440265 |
| 2022 | (557,544,143) | 136,915,051 | -4.072190303 |
| 2023 | (489,640,686) | 136,915,051 | -3.576237108 |
| MYTX     | 2019 | (1,860,716) | 539,065 | -3.451747006 |
| 2020 | (1,414,412) | 539,065 | -2.623824585 |
| 2021 | (1,644,169) | 539,065 | -3.050038493 |
| 2022 | (1,569,595) | 539,065 | -2.91169896 |
| 2023 | (1,294,544) | 539,065 | -2.40146179 |
| PBRX     | 2019 | (9,347,664,354,550) | 3,402,870,899,444 | -2.746993533 |
| 2020 | (9,623,756,462,440) | 3,402,870,899,444 | -2.828128585 |
| 2021 | (9,919,945,566,230) | 3,402,870,899,444 | -2.915169532 |
| 2022 | (9,867,272,678,760) | 3,402,870,899,444 | -2.899690576 |
| 2023 | (8,370,452,852,700) | 3,402,870,899,444 | -2.459820869 |
| POLU     | 2019 | (406,394,102,682) | 46,350,887,068 | -8.767774004 |
| 2020 | (182,338,070,216) | 46,350,887,068 | -3.933863659 |
| 2021 | (111,408,834,614) | 46,350,887,068 | -2.403596601 |
| 2022 | (100,210,809,474) | 46,350,887,068 | -2.162004134 |
| 2023 | (46,726,398,438) | 46,350,887,068 | -1.008101493 |
| POLY     | 2019 | (6,046,165,209,140) | 703,619,264,891 | -8.592950067 |
| 2020 | (4,059,953,601,150) | 703,619,264,891 | -5.770100115 |
| 2021 | (5,452,725,360,030) | 703,619,264,891 | -7.749539605 |
| 2022 | (5,901,160,972,170) | 703,619,264,891 | -8.386866686 |
| 2023 | (4,684,434,676,290) | 703,619,264,891 | -6.657627086 |
| RICY     | 2019 | (1,827,626,415,501) | 773,874,539,981 | -2.361657247 |
| 2020 | (1,085,721,445,836) | 773,874,539,981 | -1.402968298 |
| 2021 | (1,177,773,110,864) | 773,874,539,981 | -1.521917378 |
| 2022 | (1,002,437,426,122) | 773,874,539,981 | -1.29534876 |
| 2023 | (513,322,902,600) | 773,874,539,981 | -0.663315403 |
| SBAT     | 2019 | (249,434,054,851) | 173,559,153,787 | -1.437170264 |
| 2020 | (119,305,034,698) | 173,559,153,787 | -0.687402722 |
| 2021 | (110,477,331,759) | 173,559,153,787 | -0.636539931 |
| 2022 | (79,858,690,737) | 173,559,153,787 | -0.460123762 |
| 2023 | (11,976,391,264) | 173,559,153,787 | -0.069004665 |
| SRIL     | 2019 | (15,344,194,089,810) | 4,758,830,706,760 | -3.224362251 |
| 2020 | (17,109,724,200,490) | 4,758,830,706,760 | -3.595363074 |
| 2021 | (19,731,903,078,890) | 4,758,830,706,760 | -4.146376346 |
| 2022 | (12,823,544,666,050) | 4,758,830,706,760 | -2.694683937 |
| 2023 | (5,107,452,100,670) | 4,758,830,706,760 | -1.073257784 |
| SSTM     | 2019 | (340,474,551,624) | 226,989,685,383 | -1.499956049 |
| 2020 | (214,249,373,220) | 226,989,685,383 | -0.943872726 |
| 2021 | (220,837,864,307) | 226,989,685,383 | -0.972898235 |
| 2022 | (254,508,383,470) | 226,989,685,383 | -1.121233254 |
| 2023 | (70,045,259,624) | 226,989,685,383 | -0.308583447 |
| TFCO     | 2019 | (3,095,785,427,170) | 619,304,773,666 | -4.998807629 |
| 2020 | (2,295,255,420,090) | 619,304,773,666 | -3.706180733 |
| 2021 | (3,139,874,471,240) | 619,304,773,666 | -5.069998819 |
| 2022 | (3,516,881,220,890) | 619,304,773,666 | -5.678756842 |
| 2023 | (3,516,881,220,890) | 619,304,773,666 | -5.678756842 |
| TRIS     | 2019 | 1,130,071,667,248 | 373,079,663,601 | 3.029035827 |
| 2020 | 908,604,417,353 | 373,079,663,601 | 2.435416631 |
| 2021 | 871,202,519,599 | 373,079,663,601 | 2.335164858 |
| 2022 | 1,161,335,020,516 | 373,079,663,601 | 3.11283389 |
| 2023 | 1,110,304,707,373 | 373,079,663,601 | 2.976052612 |

Sumber : Laporan Keuangan Publikasi 2019-2023

Lampiran 2 Hasil Perhitungan Perputaran Modal Kerja Periode 2019-2023

Total penjualan

Rata-rata modal kerja

Perputaran Modal Kerja =

| **Kode Saham** | **Tahun** | **Total Penjualan** | **Rata-Rata Modal Kerja** | **Jumlah** |
| --- | --- | --- | --- | --- |
| ARGO | 2019 | 314,197,883,251 | -1,478,637,413,565 | -0.212491501 |
|   | 2020 | 65,006,860,674 | -1,478,637,413,565 | -0.043964031 |
|   | 2021 | 70,234,609,525 | -1,478,637,413,565 | -0.047499548 |
|   | 2022 | 75,484,823,423 | -1,478,637,413,565 | -0.051050259 |
|   | 2023 | 76,788,392,753 | -1,478,637,413,565 | -0.051931861 |
| BATA | 2019 | 931,271,436 | 111,227,233 | 8.372692648 |
|   | 2020 | 459,584,146 | 111,227,233 | 4.131939037 |
|   | 2021 | 438,484,972 | 111,227,233 | 3.94224472 |
|   | 2022 | 643,454,175 | 111,227,233 | 5.785041645 |
|   | 2023 | 488,476,918 | 111,227,233 | 4.391702507 |
| BELL | 2019 | 714,325,706,006 | 118,653,973,612 | 6.020242595 |
|   | 2020 | 538,299,250,841 | 118,653,973,612 | 4.536714907 |
|   | 2021 | 428,170,870,794 | 118,653,973,612 | 3.608567482 |
|   | 2022 | 461,846,092,519 | 118,653,973,612 | 3.892377798 |
|   | 2023 | 538,593,189,107 | 118,653,973,612 | 4.53919218 |
| CNTX | 2019 | 466,568,273,794 | -432,969,939,265 | -1.077599693 |
|   | 2020 | 205,338,162,750 | -432,969,939,265 | -0.47425501 |
|   | 2021 | 373,482,530,712 | -432,969,939,265 | -0.862606146 |
|   | 2022 | 564,791,009,444 | -432,969,939,265 | -1.304457788 |
|   | 2023 | 433,461,630,721 | -432,969,939,265 | -1.001135625 |
| ERTX | 2019 | 1,398,580,421,053 | 74,710,823,616 | 18.71991705 |
|   | 2020 | 1,224,925,259,075 | 74,710,823,616 | 16.39555288 |
|   | 2021 | 1,517,442,868,813 | 74,710,823,616 | 20.31088396 |
|   | 2022 | 1,782,755,192,250 | 74,710,823,616 | 23.86207387 |
|   | 2023 | 1,954,726,871,174 | 74,710,823,616 | 26.16390473 |
| ESTI | 2019 | 484,124,115,853 | 40,553,298,015 | 11.9379715 |
|   | 2020 | 387,827,537,839 | 40,553,298,015 | 9.563403147 |
|   | 2021 | 497,586,360,786 | 40,553,298,015 | 12.26993574 |
|   | 2022 | 462,446,222,931 | 40,553,298,015 | 11.40341835 |
|   | 2023 | 361,628,270,073 | 40,553,298,015 | 8.917357842 |
| HDTX | 2019 | 8,369,686 | -226,396,225 | -0.036969194 |
|   | 2020 | 10,600,097 | -226,396,225 | -0.046820997 |
|   | 2021 | 11,764,292 | -226,396,225 | -0.051963287 |
|   | 2022 | 6,005,743 | -226,396,225 | -0.026527576 |
|   | 2023 | 27,908 | -226,396,225 | -0.000123271 |
| HRTA | 2019 | 3,235,522,159,813 | 2,447,460,968,612 | 1.321991321 |
|   | 2020 | 4,138,626,813,254 | 2,447,460,968,612 | 1.690987871 |
|    | 2021 | 5,237,905,426,180 | 2,447,460,968,612 | 2.140138492 |
| 2022 | 6,918,453,560,506 | 2,447,460,968,612 | 2.826788108 |
|   | 2023 | 12,857,028,724,562 | 2,447,460,968,612 | 5.253210936 |
| INDR | 2019 | 12,433,319,180,583 | 8,567,763,934,512 | 1.451174341 |
|   | 2020 | 9,539,240,393,694 | 8,567,763,934,512 | 1.113387398 |
|   | 2021 | 14,317,586,162,849 | 8,567,763,934,512 | 1.671099516 |
|   | 2022 | 15,160,341,610,799 | 8,567,763,934,512 | 1.769463039 |
|   | 2023 | 12,722,367,410,197 | 8,567,763,934,512 | 1.484911058 |
| INOV | 2019 | 494,684,971 | -74,872,221 | -6.607056187 |
|   | 2020 | 518,652,053 | -74,872,221 | -6.927162652 |
|   | 2021 | 633,300,205 | -74,872,221 | -8.458413502 |
|   | 2022 | 691,532,368 | -74,872,221 | -9.236167416 |
|   | 2023 | 600,210,346 | -74,872,221 | -8.016462421 |
| MYTX | 2019 | 1,846,733 | -1,172,712 | -1.574754074 |
|   | 2020 | 1,388,468 | -1,172,712 | -1.183980381 |
|   | 2021 | 1,702,852 | -1,172,712 | -1.452063252 |
|   | 2022 | 1,623,733 | -1,172,712 | -1.384596559 |
|   | 2023 | 1,207,058 | -1,172,712 | -1.029287668 |
| PBRX | 2019 | 10,770,136,726,864 | 6,519,830,624,356 | 1.651904374 |
|   | 2020 | 11,091,488,368,545 | 6,519,830,624,356 | 1.701192716 |
|   | 2021 | 11,165,213,635,461 | 6,519,830,624,356 | 1.712500566 |
|   | 2022 | 11,174,913,444,597 | 6,519,830,624,356 | 1.713988306 |
|   | 2023 | 9,418,967,064,899 | 6,519,830,624,356 | 1.44466438 |
| POLU | 2019 | 467,723,294,399 | 88,667,141,183 | 5.275046518 |
|   | 2020 | 196,517,768,308 | 88,667,141,183 | 2.216353947 |
|   | 2021 | 104,782,481,860 | 88,667,141,183 | 1.18175099 |
|   | 2022 | 126,547,485,872 | 88,667,141,183 | 1.427219646 |
|   | 2023 | 55,131,587,283 | 88,667,141,183 | 0.621781491 |
| POLY | 2019 | 6,490,667,438,710 | -16,012,049,534,642 | -0.405361439 |
|   | 2020 | 4,228,869,439,900 | -16,012,049,534,642 | -0.264105443 |
|   | 2021 | 6,044,041,158,225 | -16,012,049,534,642 | -0.377468303 |
|   | 2022 | 6,433,076,521,620 | -16,012,049,534,642 | -0.401764715 |
|   | 2023 | 4,718,874,998,320 | -16,012,049,534,642 | -0.294707744 |
| RICY | 2019 | 2,151,323,988,585 | 441,340,313,241 | 4.87452409 |
|   | 2020 | 1,286,059,282,439 | 441,340,313,241 | 2.913985521 |
|   | 2021 | 1,375,931,426,011 | 441,340,313,241 | 3.117620088 |
|   | 2022 | 1,214,494,538,430 | 441,340,313,241 | 2.751832321 |
|   | 2023 | 656,363,428,635 | 441,340,313,241 | 1.487204792 |
| SBAT | 2019 | 315,790,682,205 | -107,780,967,167 | -2.929929936 |
|   | 2020 | 177,551,568,583 | -107,780,967,167 | -1.647336939 |
|   | 2021 | 166,888,495,594 | -107,780,967,167 | -1.548404138 |
|   | 2022 | 111,989,805,385 | -107,780,967,167 | -1.039049921 |
|   | 2023 | 11,085,614,084 | -107,780,967,167 | -0.102853169 |
| SRIL  | 2019 | 19,151,622,919,310 | 2,361,755,339,202 | 8.109063035 |
| 2020 | 20,784,036,867,720 | 2,361,755,339,202 | 8.800249765 |
|  | 2021 | 13,734,112,337,855 | 2,361,755,339,202 | 5.815213841 |
|   | 2022 | 8,500,580,540,655 | 2,361,755,339,202 | 3.599263819 |
|   | 2023 | 4,027,059,289,435 | 2,361,755,339,202 | 1.705112813 |
|  SSTM | 2019 | 354,113,973,461 | 94,658,200,502 | 3.740975125 |
| 2020 | 220,499,855,235 | 94,658,200,502 | 2.329432147 |
|   | 2021 | 226,838,383,304 | 94,658,200,502 | 2.396394418 |
|   | 2022 | 260,232,693,262 | 94,658,200,502 | 2.749182764 |
|   | 2023 | 182,806,724,690 | 94,658,200,502 | 1.931229663 |
| TFCO  | 2019 | 3,063,103,551,830 | 765,221,001,209 | 4.002900531 |
| 2020 | 2,410,264,935,400 | 765,221,001,209 | 3.149763182 |
|   | 2021 | 3,471,936,417,880 | 765,221,001,209 | 4.537168233 |
|   | 2022 | 3,653,711,354,545 | 765,221,001,209 | 4.774713905 |
|   | 2023 | 31,773,593,237,365 | 765,221,001,209 | 41.52211346 |
| TRIS  | 2019 | 1,478,735,205,373 | 370,630,412,397 | 3.989783774 |
| 2020 | 1,141,269,765,789 | 370,630,412,397 | 3.079266373 |
|   | 2021 | 1,098,352,842,355 | 370,630,412,397 | 2.963471981 |
|   | 2022 | 1,498,011,822,265 | 370,630,412,397 | 4.041794122 |
|   | 2023 | 1,472,856,196,208 | 370,630,412,397 | 3.973921586 |

Sumber : Laporan Keuangan Publikasi 2019-2023

Lampiran 3 Hasil Perhitungan Perputaran Piutang Periode 2019-2023

Penjualan

Rata-rata piutang

Perputaran Piutang =

| **Kode Saham** | **Tahun** | **Penjualan** | **Rata-Rata Piutang** | **Jumlah** |
| --- | --- | --- | --- | --- |
| ARGO | 2019 | 314,197,883,251 | 72,012,850,748 | 4.363080756 |
|   | 2020 | 65,006,860,674 | 72,012,850,748 | 0.902711947 |
|   | 2021 | 70,234,609,525 | 72,012,850,748 | 0.975306613 |
|   | 2022 | 75,484,823,423 | 72,012,850,748 | 1.048213237 |
|   | 2023 | 76,788,392,753 | 72,012,850,748 | 1.066315136 |
| BATA | 2019 | 931,271,436 | 21,601,058 | 43.11230663 |
|   | 2020 | 459,584,146 | 21,601,058 | 21.27600167 |
|   | 2021 | 438,484,972 | 21,601,058 | 20.2992359 |
|   | 2022 | 643,454,175 | 21,601,058 | 29.78808607 |
|   | 2023 | 488,476,918 | 21,601,058 | 22.61356448 |
| BELL | 2019 | 714,325,706,006 | 106,654,647,642 | 6.697558164 |
|   | 2020 | 538,299,250,841 | 106,654,647,642 | 5.047124178 |
|   | 2021 | 428,170,870,794 | 106,654,647,642 | 4.014554267 |
|   | 2022 | 461,846,092,519 | 106,654,647,642 | 4.330295048 |
|   | 2023 | 538,593,189,107 | 106,654,647,642 | 5.04988016 |
| CNTX | 2019 | 466,568,273,794 | 99,568,443,406 | 4.68590507 |
|   | 2020 | 205,338,162,750 | 99,568,443,406 | 2.062281539 |
|   | 2021 | 373,482,530,712 | 99,568,443,406 | 3.751013051 |
|   | 2022 | 564,791,009,444 | 99,568,443,406 | 5.672389666 |
|   | 2023 | 433,461,630,721 | 99,568,443,406 | 4.353403708 |
| ERTX | 2019 | 1,398,580,421,053 | 197,699,494,240 | 7.074274147 |
|   | 2020 | 1,224,925,259,075 | 197,699,494,240 | 6.195894753 |
|   | 2021 | 1,517,442,868,813 | 197,699,494,240 | 7.675502027 |
|   | 2022 | 1,782,755,192,250 | 197,699,494,240 | 9.017500015 |
|   | 2023 | 1,954,726,871,174 | 197,699,494,240 | 9.887364046 |
| ESTI | 2019 | 484,124,115,853 | 39,260,386,576 | 12.33110924 |
|   | 2020 | 387,827,537,839 | 39,260,386,576 | 9.87834231 |
|   | 2021 | 497,586,360,786 | 39,260,386,576 | 12.67400564 |
|   | 2022 | 462,446,222,931 | 39,260,386,576 | 11.77895236 |
|   | 2023 | 361,628,270,073 | 39,260,386,576 | 9.211021633 |
| HDTX | 2019 | 8,369,686 | 18,452,785 | 0.453573051 |
|   | 2020 | 10,600,097 | 18,452,785 | 0.574444291 |
|   | 2021 | 11,764,292 | 18,452,785 | 0.637534768 |
|   | 2022 | 6,005,743 | 18,452,785 | 0.325465397 |
|   | 2023 | 27,908 | 18,452,785 | 0.0015124 |
| HRTA | 2019 | 3,235,522,159,813 | 900,382,521,046 | 3.593497302 |
|   | 2020 | 4,138,626,813,254 | 900,382,521,046 | 4.596520608 |
|   | 2021 | 5,237,905,426,180 | 900,382,521,046 | 5.817422377 |
|   | 2022 | 6,918,453,560,506 | 900,382,521,046 | 7.683904784 |
|   | 2023 | 12,857,028,724,562 | 900,382,521,046 | 14.27951834 |
| INDR | 2019 | 12,433,319,180,583 | 1,388,257,845,941 | 8.956059004 |
|   | 2020 | 9,539,240,393,694 | 1,388,257,845,941 | 6.871375099 |
|   | 2021 | 14,317,586,162,849 | 1,388,257,845,941 | 10.31334792 |
|   | 2022 | 15,160,341,610,799 | 1,388,257,845,941 | 10.92040766 |
|   | 2023 | 12,722,367,410,197 | 1,388,257,845,941 | 9.164268329 |
| INOV | 2019 | 494,684,971 | 123,982,911 | 3.9899448 |
|   | 2020 | 518,652,053 | 123,982,911 | 4.18325436 |
|   | 2021 | 633,300,205 | 123,982,911 | 5.107963669 |
|   | 2022 | 691,532,368 | 123,982,911 | 5.577642616 |
|   | 2023 | 600,210,346 | 123,982,911 | 4.841073186 |
| MYTX | 2019 | 1,846,733 | 105,946 | 17.43088932 |
|   | 2020 | 1,388,468 | 105,946 | 13.10543107 |
|   | 2021 | 1,702,852 | 105,946 | 16.07282955 |
|   | 2022 | 1,623,733 | 105,946 | 15.32604346 |
|   | 2023 | 1,207,058 | 105,946 | 11.39314368 |
| PBRX | 2019 | 10,770,136,726,864 | 2,410,012,657,063 | 4.468912931 |
|   | 2020 | 11,091,488,368,545 | 2,410,012,657,063 | 4.602253161 |
|   | 2021 | 11,165,213,635,461 | 2,410,012,657,063 | 4.632844397 |
|   | 2022 | 11,174,913,444,597 | 2,410,012,657,063 | 4.636869193 |
|   | 2023 | 9,418,967,064,899 | 2,410,012,657,063 | 3.908264563 |
| POLU | 2019 | 467,723,294,399 | 39,204,973,832 | 11.93020295 |
|   | 2020 | 196,517,768,308 | 39,204,973,832 | 5.012572363 |
|   | 2021 | 104,782,481,860 | 39,204,973,832 | 2.672683377 |
|   | 2022 | 126,547,485,872 | 39,204,973,832 | 3.227842631 |
|   | 2023 | 55,131,587,283 | 39,204,973,832 | 1.406239614 |
| POLY | 2019 | 6,490,667,438,710 | 1,133,824,420,796 | 5.724578973 |
|   | 2020 | 4,228,869,439,900 | 1,133,824,420,796 | 3.729739246 |
|   | 2021 | 6,044,041,158,225 | 1,133,824,420,796 | 5.330667648 |
|   | 2022 | 6,433,076,521,620 | 1,133,824,420,796 | 5.673785468 |
|   | 2023 | 4,718,874,998,320 | 1,133,824,420,796 | 4.161909826 |
| RICY | 2019 | 2,151,323,988,585 | 391,411,411,751 | 5.496324134 |
|   | 2020 | 1,286,059,282,439 | 391,411,411,751 | 3.285696952 |
|   | 2021 | 1,375,931,426,011 | 391,411,411,751 | 3.515307384 |
|   | 2022 | 1,214,494,538,430 | 391,411,411,751 | 3.102859298 |
|   | 2023 | 656,363,428,635 | 391,411,411,751 | 1.67691439 |
| SBAT | 2019 | 315,790,682,205 | 125,243,749,656 | 2.521408718 |
|   | 2020 | 177,551,568,583 | 125,243,749,656 | 1.417648139 |
|   | 2021 | 166,888,495,594 | 125,243,749,656 | 1.332509575 |
|   | 2022 | 111,989,805,385 | 125,243,749,656 | 0.894174805 |
|   | 2023 | 11,085,614,084 | 125,243,749,656 | 0.088512314 |
| SRIL | 2019 | 19,151,622,919,310 | 2,550,184,307,281 | 7.509897565 |
|   | 2020 | 20,784,036,867,720 | 2,550,184,307,281 | 8.150013632 |
|   | 2021 | 13,734,112,337,855 | 2,550,184,307,281 | 5.385537155 |
|   | 2022 | 8,500,580,540,655 | 2,550,184,307,281 | 3.333320073 |
|   | 2023 | 4,027,059,289,435 | 2,550,184,307,281 | 1.579124802 |
| SSTM | 2019 | 354,113,973,461 | 3,673,304,711,974 | 0.096402014 |
|   | 2020 | 220,499,855,235 | 3,673,304,711,974 | 0.060027652 |
|   | 2021 | 226,838,383,304 | 3,673,304,711,974 | 0.061753217 |
|   | 2022 | 260,232,693,262 | 3,673,304,711,974 | 0.070844298 |
|   | 2023 | 182,806,724,690 | 3,673,304,711,974 | 0.049766284 |
| TFCO | 2019 | 3,063,103,551,830 | 330,735,350,372 | 9.261494268 |
|   | 2020 | 2,410,264,935,400 | 330,735,350,372 | 7.287593941 |
|   | 2021 | 3,471,936,417,880 | 330,735,350,372 | 10.49762722 |
|   | 2022 | 3,653,711,354,545 | 330,735,350,372 | 11.04723565 |
|   | 2023 | 31,773,593,237,365 | 330,735,350,372 | 96.0695408 |
| TRIS | 2019 | 1,478,735,205,373 | 244,757,373,360 | 6.04163701 |
|   | 2020 | 1,141,269,765,789 | 244,757,373,360 | 4.662861634 |
|   | 2021 | 1,098,352,842,355 | 244,757,373,360 | 4.487516871 |
|   | 2022 | 1,498,011,822,265 | 244,757,373,360 | 6.120395074 |
|   | 2023 | 1,472,856,196,208 | 244,757,373,360 | 6.017617267 |

Sumber : Laporan Keuangan Publikasi 2019-2023

Lampiran 4 Hasil Perhitungan Profitabilitas Periode 2019-2023

Earning after taxes

Total asset

Retrurn On Assets =

| **Kode Saham** | **Tahun** | **Earning After Taxes** | **Total Assets**  | **Jumlah** | **Rata-Rata** |
| --- | --- | --- | --- | --- | --- |
| ARGO     | 2019 | 11,836,303 | 138,308,569 | 0.085578956 |   |
| 2020 | 8,311,594 | 130,423,643 | 0.063727663 |   |
| 2021 | 70,234,609,525 | 1,122,379,949,306 | 0.062576501 |   |
| 2022 | (97,329,335,486) | 1,131,012,816,185 | -0.086055024 |   |
| 2023 | (25,005,775,645) | 1,095,336,386,780 | -0.022829312 | 0.850499797 |
| BATA     | 2019 | 23,441,338 | 863,146,554 | 0.027158005 |   |
| 2020 | -177,761,030 | 775,324,937 | -0.229272943 |   |
| 2021 | -51,233,663 | 652,742,235 | -0.078489885 |   |
| 2022 | -106,123,023 | 724,073,958 | -0.146563789 |   |
| 2023 | -80,653,873 | 681,779,567 | -0.118299047 | 0.742422057 |
| BELL     | 2019 | 23,213,651,840 | 590,884,444,113 | 0.03928628 |   |
| 2020 | -16,558,668,514 | 554,235,931,111 | -0.02987657 |   |
| 2021 | 4,172,725,902 | 524,473,606,697 | 0.007956026 |   |
| 2022 | 4,462,174,046 | 525,780,962,665 | 0.008486755 |   |
| 2023 | 11,472,790,689 | 530,041,342,956 | 0.021645086 | 0.841249596 |
| CNTX     | 2019 | 24,645,737,280 | 746,865,425,580 | 0.0329989 |   |
| 2020 | 66,120,168,060 | 607,712,491,920 | 0.108801726 |   |
| 2021 | 72,300,333,900 | 624,917,718,240 | 0.115695766 |   |
| 2022 | 25,221,975,420 | 673,819,245,480 | 0.037431367 |   |
| 2023 | -65,731,651,620 | 539,161,388,820 | -0.121914612 | 0.862168858 |
| ERTX     | 2019 | 13,684,139,580 | 1,161,337,459,680 | 0.011783086 |   |
| 2020 | (15,780,264,960) | 1,114,861,339,080 | -0.014154464 |   |
| 2021 | 25,750,035,180 | 1,182,068,455,620 | 0.021783878 |   |
| 2022 | 63,677,298,180 | 1,279,932,729,000 | 0.049750504 |   |
| 2023 | 44,403,523,440 | 1,296,968,331,000 | 0.034236398 | 0.850566567 |
| ESTI     | 2019 | -45,413,318,220 | 993,681,591,540 | -0.045702083 |    |
| 2020 | (9,397,369,440) | 885,737,402,700 | -0.010609656 |
| 2021 | 26,219,932,920 | 832,730,583,180 | 0.031486694 |   |
| 2022 | 1,078,346,940 | 783,641,236,680 | 0.001376072 |   |
| 2023 | 21,194,601,060 | 792,100,534,200 | 0.026757463 | 0.833884748 |
| HDTX     | 2019 | -65,673,323 | 423,791,061 | -0.154966277 |   |
| 2020 | (47,921,139) | 384,116,199 | -0.124756881 |   |
| 2021 | (41,970,335) | 346,777,425 | -0.121029606 |   |
| 2022 | (57,362,444) | 265,693,432 | -0.21589711 |   |
| 2023 | -14,979,789 | 239,221,696 | -0.062618856 | 0.720121878 |
| HRTA     | 2019 | 149,990,636,633 | 2,311,190,054,987 | 0.064897578 |   |
| 2020 | 170,679,197,734 | 2,830,686,417,461 | 0.060296046 |   |
| 2021 | 194,432,397,219 | 3,478,074,220,547 | 0.055902314 |   |
| 2022 | 254,127,589,783 | 3,849,086,552,639 | 0.066022831 |   |
| 2023 | 306,268,555,595 | 5,029,463,481,305 | 0.060894876 | 0.884668941 |
| INDR     | 2019 | 676,843,133,940 | 12,252,857,470,200 | 0.055239615 |   |
| 2020 | 101,332,189,920 | 12,420,291,893,400 | 0.0081586 |   |
| 2021 | 1,375,080,314,100 | 14,723,392,504,440 | 0.093394258 |   |
| 2022 | 691,613,620,380 | 14,142,951,512,160 | 0.048901647 |   |
| 2023 | (663,584,648,640) | 13,351,089,317,040 | -0.04970266 | 0.85933191 |
| INOV     | 2019 | 22,534,439 | 691,324,273 | 0.032596048 |   |
| 2020 | (9,234,526) | 796,514,753 | -0.011593666 |   |
| 2021 | 27,322,803 | 890,731,798 | 0.030674557 |   |
| 2022 | (36,392,146) | 999,571,977 | -0.036407729 |   |
| 2023 | (27,556,712) | 998,126,714 | -0.02760843 | 0.831276796 |
| MYTX     | 2019 | (241,027) | 3,686,259 | -0.065385259 |   |
| 2020 | (114,827) | 3,884,567 | -0.029559794 |   |
| 2021 | (139,616) | 3,744,934 | -0.037281298 |   |
| 2022 | (21,393) | 3,959,904 | -0.005402404 |   |
| 2023 | (352,071) | 3,728,500 | -0.094426981 | 0.794657377 |
| PBRX     | 2019 | 277,248,316,920 | 10,705,484,683,920 | 0.025897783 |   |
| 2020 | 314,909,273,640 | 11,270,191,833,540 | 0.027941785 |   |
| 2021 | 250,465,170,120 | 11,327,127,101,580 | 0.022111977 |   |
| 2022 | 37,989,522,540 | 11,782,729,309,740 | 0.00322417 |   |
| 2023 | 6,825,411,420 | 11,329,425,387,540 | 0.00060245 | 0.846629694 |
| POLU     | 2019 | 8,991,475,073 | 343,523,377,441 | 0.026174274 |   |
| 2020 | -6,104,429,448 | 281,999,247,242 | -0.021646971 |   |
| 2021 | -51,502,558,124 | 203,215,129,901 | -0.253438601 |   |
| 2022 | -6,264,038,341 | 209,337,963,370 | -0.029923088 |   |
| 2023 | -7,135,641,918 | 198,790,386,392 | -0.035895307 | 0.780878385 |
| POLY     | 2019 | (193,736,371,560) | 3,935,758,121,700 | -0.049224664 |   |
| 2020 | (334,132,431,000) | 3,756,549,686,160 | -0.088946629 |   |
| 2021 | 27,411,368,160 | 3,873,242,242,800 | 0.007077112 |   |
| 2022 | 200,222,046,540 | 3,708,523,532,280 | 0.053989693 |   |
| 2023 | (182,329,997,820) | 3,434,365,119,420 | -0.05308987 | 0.811634274 |
| RICY     | 2019 | 17,219,044,542 | 1,619,854,736,252 | 0.010629993 |   |
| 2020 | -77,578,476,383 | 1,736,897,169,061 | -0.044664979 |   |
| 2021 | -66,098,078,641 | 1,694,313,967,553 | -0.039011706 |   |
| 2022 | -69,375,798,083 | 1,639,882,069,759 | -0.042305358 |   |
| 2023 | -19,770,405,083 | 1,582,199,705,720 | -0.012495518 | 0.812025405 |
| SBAT  | 2019 | -44,198,394,472 | 521,661,832,270 | -0.084726142 |   |
| 2020 | -5,887,199,392 | 561,334,457,682 | -0.010487864 |   |
|   | 2021 | -47,002,475,250 | 694,230,223,329 | -0.06770445 |   |
|    | 2022 | -87,623,413,194 | 657,657,257,402 | -0.133235682 |   |
| 2023 | -23,877,111,752 | 643,066,253,205 | -0.037130096 | 0.777785961 |
| SRIL     | 2019 | 1,425,230,430,480 | 25,353,433,536,300 | 0.056214494 |   |
| 2020 | 1,387,386,256,080 | 30,113,338,538,400 | 0.04607215 |   |
| 2021 | (17,582,561,928,720) | 20,067,982,179,960 | -0.876149967 |   |
| 2022 | (6,431,856,997,860) | 12,431,616,154,140 | -0.517378989 |   |
| 2023 | (1,873,200,503,580) | 10,626,119,184,900 | -0.176282655 | 0.588745839 |
| SSTM     | 2019 | (16,266,732,177) | 514,765,731,890 | -0.031600262 |   |
| 2020 | (15,354,377,443) | 482,065,294,095 | -0.03185124 |   |
| 2021 | 56,749,821,815 | 471,128,491,654 | 0.120455084 |   |
| 2022 | (6,044,861,775) | 442,106,656,917 | -0.013672859 |   |
| 2023 | 1,495,136,112 | 387,399,522,959 | 0.003859417 | 0.841198357 |
| TFCO     | 2019 | -85,500,754,740 | 5,098,636,427,760 | -0.016769337 |   |
| 2020 | (13,943,584,140) | 5,166,173,882,460 | -0.002699016 |   |
| 2021 | 218,265,979,920 | 5,443,081,698,720 | 0.040099707 |   |
| 2022 | 55,540,452,720 | 5,432,503,511,820 | 0.010223731 |   |
| 2023 | 53,616,894,720 | 5,453,269,027,740 | 0.009832065 | 0.840114525 |
| TRIS     | 2019 | 23,236,898,190 | 1,147,246,311,331 | 0.020254498 |   |
| 2020 | (3,987,303,838) | 1,068,940,700,530 | -0.003730145 |   |
| 2021 | 18,024,581,177 | 1,060,742,742,644 | 0.016992415 |   |
| 2022 | 64,521,509,302 | 1,177,807,599,498 | 0.054781026 |   |
| 2023 | 68,176,777,896 | 1,169,584,274,422 | 0.058291463 | 0.857764876 |

Sumber : laporan keuangan publikasi 2019-2023

Lampiran 5 Hasil Uji Statistik Deskriptif

|  |
| --- |
| **Descriptive Statistics** |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Profitabilitas | 74 | -.16 | .12 | -.15 | .06097 |
| Perputaran Persediaan | 74 | -7.92 | 3.11 | -2.1257 | 2.51951 |
| Perputaran Modal Kerja | 74 | -6.61 | 9.56 | 1.7203 | 2.80458 |
| Perputaran Piutang | 74 | .00 | 17.43 | 5.1916 | 4.11465 |
| Valid N (listwise) | 74 |  |  |  |  |

Sumber: Olah Data SPSS Versi 22 Tahun 2024

Lampiran 6 Hasil Uji Normalitas

1. Grafik Histogram Uji Normalitas

Sumber : Olah Data SPSS Versi 22 tahun 2024

1. Grafik Normal P-Plot Of Regression Normalitas



Sumber : Olah Data SPSS Versi 22 tahun 2024

1. Uji Normalitas Kolmogorov-Smirnov Test

|  |
| --- |
| **One-Sample Kolmogorov-Smirnov Test** |
|  | Unstandardized Residual |
| N | 74 |
| Normal Parametersa,b | Mean | .0000000 |
| Std. Deviation | .05766909 |
| Most Extreme Differences | Absolute | .062 |
| Positive | .062 |
| Negative | -.035 |
| Test Statistic | .062 |
| Asymp. Sig. (2-tailed) | .200c,d |
| a. Test distribution is Normal. |
| b. Calculated from data. |
| c. Lilliefors Significance Correction. |
| d. This is a lower bound of the true significance. |

 Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 7 Hasil Uji Multikolonieritas

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | T | Sig. | Collinearity Statistics |
| B | Std. Error | Beta | Tolerance | VIF |
| 1 | (Constant) | -.020 | .012 |  | -1.612 | .111 |  |  |
| Perputaran Persediaan | .001 | .003 | .042 | .332 | .741 | .813 | 1.230 |
| Perputaran Modal Kerja | .006 | .003 | .262 | 2.141 | .036 | .857 | 1.168 |
| Perputaran Piutang | .002 | .002 | .137 | 1.107 | .272 | .833 | 1.201 |
| a. Dependent Variable: Profitabilitas |

Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 8 Hasil Uji Autokolerasi

|  |
| --- |
| **Model Summaryb** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .616a | .380 | .353 | .02602 | 2.040 |
| a. Predictors: (Constant), LAG\_X1, LAG\_X2, LAG\_X3 |
| b. Dependent Variable: Y1 |

Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 9 Hasil Uji Heteroskedastisitas

Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 10 Hasil Analisis Regresi Linier Berganda

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | -.020 | .012 |  | -1.612 | .111 |
| perputaran persediaan | .001 | .003 | .042 | .332 | .741 |
| perputaran modal kerja | .006 | .003 | .262 | 2.141 | .036 |
| perputaran piutang | .002 | .002 | .137 | 1.107 | .272 |
| a. Dependent Variable: profitabilitas |

Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 11 Hasil Uji Hipotesis

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | -.020 | .012 |  | -1.612 | .111 |
| perputaran persediaan | .001 | .003 | .042 | .332 | .741 |
| perputaran modal kerja | .006 | .003 | .262 | 2.141 | .036 |
| perputaran piutang | .002 | .002 | .137 | 1.107 | .272 |
| a. Dependent Variable: profitabilitas |

1. Uji Parsial (Uji T)

Sumber : Olah Data SPSS Versi 22 tahun 2024

1. Uji Simultan (Uji F)

|  |
| --- |
| **ANOVAa** |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | .029 | 3 | .010 | 2.745 | .049b |
| Residual | .243 | 70 | .003 |  |  |
| Total | .271 | 73 |  |  |  |
| a. Dependent Variable: profitabilitas |
| b. Predictors: (Constant), perputaran piutang, perputaran modal kerja, perputaran persediaan |

Sumber : Olah Data SPSS Versi 22 tahun 2024

Lampiran 12 Hasil Uji Koefisien Determinasi

|  |
| --- |
| **Model Summary** |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .616a | .380 | .353 | .02602 |
| a. Predictors: (Constant), LAG\_X1, LAG\_X2, LAG\_X3 |

 Sumber : Olah Data SPSS Versi 22 tahun 2024

# Lampiran 13 Tabel t

# Titik Persentase Distribusi t (df = 1 – 40)

| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **1** | 1.00000 | 3.07768 | 6.31375 | 12.70620 | 31.82052 | 63.65674 | 318.30884 |
| **2** | 0.81650 | 1.88562 | 2.91999 | 4.30265 | 6.96456 | 9.92484 | 22.32712 |
| **3** | 0.76489 | 1.63774 | 2.35336 | 3.18245 | 4.54070 | 5.84091 | 10.21453 |
| **4** | 0.74070 | 1.53321 | 2.13185 | 2.77645 | 3.74695 | 4.60409 | 7.17318 |
| **5** | 0.72669 | 1.47588 | 2.01505 | 2.57058 | 3.36493 | 4.03214 | 5.89343 |
| **6** | 0.71756 | 1.43976 | 1.94318 | 2.44691 | 3.14267 | 3.70743 | 5.20763 |
| **7** | 0.71114 | 1.41492 | 1.89458 | 2.36462 | 2.99795 | 3.49948 | 4.78529 |
| **8** | 0.70639 | 1.39682 | 1.85955 | 2.30600 | 2.89646 | 3.35539 | 4.50079 |
| **9** | 0.70272 | 1.38303 | 1.83311 | 2.26216 | 2.82144 | 3.24984 | 4.29681 |
| **10** | 0.69981 | 1.37218 | 1.81246 | 2.22814 | 2.76377 | 3.16927 | 4.14370 |
| **11** | 0.69745 | 1.36343 | 1.79588 | 2.20099 | 2.71808 | 3.10581 | 4.02470 |
| **12** | 0.69548 | 1.35622 | 1.78229 | 2.17881 | 2.68100 | 3.05454 | 3.92963 |
| **13** | 0.69383 | 1.35017 | 1.77093 | 2.16037 | 2.65031 | 3.01228 | 3.85198 |
| **14** | 0.69242 | 1.34503 | 1.76131 | 2.14479 | 2.62449 | 2.97684 | 3.78739 |
| **15** | 0.69120 | 1.34061 | 1.75305 | 2.13145 | 2.60248 | 2.94671 | 3.73283 |
| **16** | 0.69013 | 1.33676 | 1.74588 | 2.11991 | 2.58349 | 2.92078 | 3.68615 |
| **17** | 0.68920 | 1.33338 | 1.73961 | 2.10982 | 2.56693 | 2.89823 | 3.64577 |
| **18** | 0.68836 | 1.33039 | 1.73406 | 2.10092 | 2.55238 | 2.87844 | 3.61048 |
| **19** | 0.68762 | 1.32773 | 1.72913 | 2.09302 | 2.53948 | 2.86093 | 3.57940 |
| **20** | 0.68695 | 1.32534 | 1.72472 | 2.08596 | 2.52798 | 2.84534 | 3.55181 |
| **21** | 0.68635 | 1.32319 | 1.72074 | 2.07961 | 2.51765 | 2.83136 | 3.52715 |
| **22** | 0.68581 | 1.32124 | 1.71714 | 2.07387 | 2.50832 | 2.81876 | 3.50499 |
| **23** | 0.68531 | 1.31946 | 1.71387 | 2.06866 | 2.49987 | 2.80734 | 3.48496 |
| **24** | 0.68485 | 1.31784 | 1.71088 | 2.06390 | 2.49216 | 2.79694 | 3.46678 |
| **25** | 0.68443 | 1.31635 | 1.70814 | 2.05954 | 2.48511 | 2.78744 | 3.45019 |
| **26** | 0.68404 | 1.31497 | 1.70562 | 2.05553 | 2.47863 | 2.77871 | 3.43500 |
| **27** | 0.68368 | 1.31370 | 1.70329 | 2.05183 | 2.47266 | 2.77068 | 3.42103 |
| **28** | 0.68335 | 1.31253 | 1.70113 | 2.04841 | 2.46714 | 2.76326 | 3.40816 |
| **29** | 0.68304 | 1.31143 | 1.69913 | 2.04523 | 2.46202 | 2.75639 | 3.39624 |
| **30** | 0.68276 | 1.31042 | 1.69726 | 2.04227 | 2.45726 | 2.75000 | 3.38518 |
| **31** | 0.68249 | 1.30946 | 1.69552 | 2.03951 | 2.45282 | 2.74404 | 3.37490 |
| **32** | 0.68223 | 1.30857 | 1.69389 | 2.03693 | 2.44868 | 2.73848 | 3.36531 |
| **33** | 0.68200 | 1.30774 | 1.69236 | 2.03452 | 2.44479 | 2.73328 | 3.35634 |
| **34** | 0.68177 | 1.30695 | 1.69092 | 2.03224 | 2.44115 | 2.72839 | 3.34793 |
| **35** | 0.68156 | 1.30621 | 1.68957 | 2.03011 | 2.43772 | 2.72381 | 3.34005 |
| **36** | 0.68137 | 1.30551 | 1.68830 | 2.02809 | 2.43449 | 2.71948 | 3.33262 |
| **37** | 0.68118 | 1.30485 | 1.68709 | 2.02619 | 2.43145 | 2.71541 | 3.32563 |
| **38** | 0.68100 | 1.30423 | 1.68595 | 2.02439 | 2.42857 | 2.71156 | 3.31903 |
| **39** | 0.68083 | 1.30364 | 1.68488 | 2.02269 | 2.42584 | 2.70791 | 3.31279 |
| **40** | 0.68067 | 1.30308 | 1.68385 | 2.02108 | 2.42326 | 2.70446 | 3.30688 |

# Titik Persentase Distribusi t (df = 41 – 80)

| **Pr** | **0.25** | **0.10** | **0.05** | **0.025** | **0.01** | **0.005** | **0.001** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **df** | **0.50** | **0.20** | **0.10** | **0.050** | **0.02** | **0.010** | **0.002** |
| **41** | 0.68052 | 1.30254 | 1.68288 | 2.01954 | 2.42080 | 2.70118 | 3.30127 |
| **42** | 0.68038 | 1.30204 | 1.68195 | 2.01808 | 2.41847 | 2.69807 | 3.29595 |
| **43** | 0.68024 | 1.30155 | 1.68107 | 2.01669 | 2.41625 | 2.69510 | 3.29089 |
| **44** | 0.68011 | 1.30109 | 1.68023 | 2.01537 | 2.41413 | 2.69228 | 3.28607 |
| **45** | 0.67998 | 1.30065 | 1.67943 | 2.01410 | 2.41212 | 2.68959 | 3.28148 |
| **46** | 0.67986 | 1.30023 | 1.67866 | 2.01290 | 2.41019 | 2.68701 | 3.27710 |
| **47** | 0.67975 | 1.29982 | 1.67793 | 2.01174 | 2.40835 | 2.68456 | 3.27291 |
| **48** | 0.67964 | 1.29944 | 1.67722 | 2.01063 | 2.40658 | 2.68220 | 3.26891 |
| **49** | 0.67953 | 1.29907 | 1.67655 | 2.00958 | 2.40489 | 2.67995 | 3.26508 |
| **50** | 0.67943 | 1.29871 | 1.67591 | 2.00856 | 2.40327 | 2.67779 | 3.26141 |
| **51** | 0.67933 | 1.29837 | 1.67528 | 2.00758 | 2.40172 | 2.67572 | 3.25789 |
| **52** | 0.67924 | 1.29805 | 1.67469 | 2.00665 | 2.40022 | 2.67373 | 3.25451 |
| **53** | 0.67915 | 1.29773 | 1.67412 | 2.00575 | 2.39879 | 2.67182 | 3.25127 |
| **54** | 0.67906 | 1.29743 | 1.67356 | 2.00488 | 2.39741 | 2.66998 | 3.24815 |
| **55** | 0.67898 | 1.29713 | 1.67303 | 2.00404 | 2.39608 | 2.66822 | 3.24515 |
| **56** | 0.67890 | 1.29685 | 1.67252 | 2.00324 | 2.39480 | 2.66651 | 3.24226 |
| **57** | 0.67882 | 1.29658 | 1.67203 | 2.00247 | 2.39357 | 2.66487 | 3.23948 |
| **58** | 0.67874 | 1.29632 | 1.67155 | 2.00172 | 2.39238 | 2.66329 | 3.23680 |
| **59** | 0.67867 | 1.29607 | 1.67109 | 2.00100 | 2.39123 | 2.66176 | 3.23421 |
| **60** | 0.67860 | 1.29582 | 1.67065 | 2.00030 | 2.39012 | 2.66028 | 3.23171 |
| **61** | 0.67853 | 1.29558 | 1.67022 | 1.99962 | 2.38905 | 2.65886 | 3.22930 |
| **62** | 0.67847 | 1.29536 | 1.66980 | 1.99897 | 2.38801 | 2.65748 | 3.22696 |
| **63** | 0.67840 | 1.29513 | 1.66940 | 1.99834 | 2.38701 | 2.65615 | 3.22471 |
| **64** | 0.67834 | 1.29492 | 1.66901 | 1.99773 | 2.38604 | 2.65485 | 3.22253 |
| **65** | 0.67828 | 1.29471 | 1.66864 | 1.99714 | 2.38510 | 2.65360 | 3.22041 |
| **66** | 0.67823 | 1.29451 | 1.66827 | 1.99656 | 2.38419 | 2.65239 | 3.21837 |
| **67** | 0.67817 | 1.29432 | 1.66792 | 1.99601 | 2.38330 | 2.65122 | 3.21639 |
| **68** | 0.67811 | 1.29413 | 1.66757 | 1.99547 | 2.38245 | 2.65008 | 3.21446 |
| **69** | 0.67806 | 1.29394 | 1.66724 | 1.99495 | 2.38161 | 2.64898 | 3.21260 |
| **71** | 0.67796 | 1.29359 | 1.66660 | 1.99394 | 2.38002 | 2.64686 | 3.20903 |
| **72** | 0.67791 | 1.29342 | 1.66629 | 1.99346 | 2.37926 | 2.64585 | 3.20733 |
| **73** | 0.67787 | 1.29326 | 1.66600 | 1.99300 | 2.37852 | 2.64487 | 3.20567 |
| **74** | 0.67782 | 1.29310 | 1.66571 | 1.99254 | 2.37780 | 2.64391 | 3.20406 |
| **75** | 0.67778 | 1.29294 | 1.66543 | 1.99210 | 2.37710 | 2.64298 | 3.20249 |
| **76** | 0.67773 | 1.29279 | 1.66515 | 1.99167 | 2.37642 | 2.64208 | 3.20096 |
| **77** | 0.67769 | 1.29264 | 1.66488 | 1.99125 | 2.37576 | 2.64120 | 3.19948 |
| **78** | 0.67765 | 1.29250 | 1.66462 | 1.99085 | 2.37511 | 2.64034 | 3.19804 |
| **79** | 0.67761 | 1.29236 | 1.66437 | 1.99045 | 2.37448 | 2.63950 | 3.19663 |
| **80** | 0.67757 | 1.29222 | 1.66412 | 1.99006 | 2.37387 | 2.63869 | 3.19526 |

Lampiran 14 tabel f

| **df untuk****penyebut (N2)** | **df untuk pembilang (N1)** |
| --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| **1** | 161 | 199 | 216 | 225 | 230 | 234 | 237 | 239 | 241 | 242 | 243 | 244 | 245 | 245 | 246 |
| **2** | 18.51 | 19.00 | 19.16 | 19.25 | 19.30 | 19.33 | 19.35 | 19.37 | 19.38 | 19.40 | 19.40 | 19.41 | 19.42 | 19.42 | 19.43 |
| **3** | 10.13 | 9.55 | 9.28 | 9.12 | 9.01 | 8.94 | 8.89 | 8.85 | 8.81 | 8.79 | 8.76 | 8.74 | 8.73 | 8.71 | 8.70 |
| **4** | 7.71 | 6.94 | 6.59 | 6.39 | 6.26 | 6.16 | 6.09 | 6.04 | 6.00 | 5.96 | 5.94 | 5.91 | 5.89 | 5.87 | 5.86 |
| **5** | 6.61 | 5.79 | 5.41 | 5.19 | 5.05 | 4.95 | 4.88 | 4.82 | 4.77 | 4.74 | 4.70 | 4.68 | 4.66 | 4.64 | 4.62 |
| **6** | 5.99 | 5.14 | 4.76 | 4.53 | 4.39 | 4.28 | 4.21 | 4.15 | 4.10 | 4.06 | 4.03 | 4.00 | 3.98 | 3.96 | 3.94 |
| **7** | 5.59 | 4.74 | 4.35 | 4.12 | 3.97 | 3.87 | 3.79 | 3.73 | 3.68 | 3.64 | 3.60 | 3.57 | 3.55 | 3.53 | 3.51 |
| **8** | 5.32 | 4.46 | 4.07 | 3.84 | 3.69 | 3.58 | 3.50 | 3.44 | 3.39 | 3.35 | 3.31 | 3.28 | 3.26 | 3.24 | 3.22 |
| **9** | 5.12 | 4.26 | 3.86 | 3.63 | 3.48 | 3.37 | 3.29 | 3.23 | 3.18 | 3.14 | 3.10 | 3.07 | 3.05 | 3.03 | 3.01 |
| **10** | 4.96 | 4.10 | 3.71 | 3.48 | 3.33 | 3.22 | 3.14 | 3.07 | 3.02 | 2.98 | 2.94 | 2.91 | 2.89 | 2.86 | 2.85 |
| **11** | 4.84 | 3.98 | 3.59 | 3.36 | 3.20 | 3.09 | 3.01 | 2.95 | 2.90 | 2.85 | 2.82 | 2.79 | 2.76 | 2.74 | 2.72 |
| **12** | 4.75 | 3.89 | 3.49 | 3.26 | 3.11 | 3.00 | 2.91 | 2.85 | 2.80 | 2.75 | 2.72 | 2.69 | 2.66 | 2.64 | 2.62 |
| **13** | 4.67 | 3.81 | 3.41 | 3.18 | 3.03 | 2.92 | 2.83 | 2.77 | 2.71 | 2.67 | 2.63 | 2.60 | 2.58 | 2.55 | 2.53 |
| **14** | 4.60 | 3.74 | 3.34 | 3.11 | 2.96 | 2.85 | 2.76 | 2.70 | 2.65 | 2.60 | 2.57 | 2.53 | 2.51 | 2.48 | 2.46 |
| **15** | 4.54 | 3.68 | 3.29 | 3.06 | 2.90 | 2.79 | 2.71 | 2.64 | 2.59 | 2.54 | 2.51 | 2.48 | 2.45 | 2.42 | 2.40 |
| **16** | 4.49 | 3.63 | 3.24 | 3.01 | 2.85 | 2.74 | 2.66 | 2.59 | 2.54 | 2.49 | 2.46 | 2.42 | 2.40 | 2.37 | 2.35 |
| **17** | 4.45 | 3.59 | 3.20 | 2.96 | 2.81 | 2.70 | 2.61 | 2.55 | 2.49 | 2.45 | 2.41 | 2.38 | 2.35 | 2.33 | 2.31 |
| **18** | 4.41 | 3.55 | 3.16 | 2.93 | 2.77 | 2.66 | 2.58 | 2.51 | 2.46 | 2.41 | 2.37 | 2.34 | 2.31 | 2.29 | 2.27 |
| **19** | 4.38 | 3.52 | 3.13 | 2.90 | 2.74 | 2.63 | 2.54 | 2.48 | 2.42 | 2.38 | 2.34 | 2.31 | 2.28 | 2.26 | 2.23 |
| **20** | 4.35 | 3.49 | 3.10 | 2.87 | 2.71 | 2.60 | 2.51 | 2.45 | 2.39 | 2.35 | 2.31 | 2.28 | 2.25 | 2.22 | 2.20 |
| **21** | 4.32 | 3.47 | 3.07 | 2.84 | 2.68 | 2.57 | 2.49 | 2.42 | 2.37 | 2.32 | 2.28 | 2.25 | 2.22 | 2.20 | 2.18 |
| **22** | 4.30 | 3.44 | 3.05 | 2.82 | 2.66 | 2.55 | 2.46 | 2.40 | 2.34 | 2.30 | 2.26 | 2.23 | 2.20 | 2.17 | 2.15 |
| **23** | 4.28 | 3.42 | 3.03 | 2.80 | 2.64 | 2.53 | 2.44 | 2.37 | 2.32 | 2.27 | 2.24 | 2.20 | 2.18 | 2.15 | 2.13 |
| **24** | 4.26 | 3.40 | 3.01 | 2.78 | 2.62 | 2.51 | 2.42 | 2.36 | 2.30 | 2.25 | 2.22 | 2.18 | 2.15 | 2.13 | 2.11 |
| **25** | 4.24 | 3.39 | 2.99 | 2.76 | 2.60 | 2.49 | 2.40 | 2.34 | 2.28 | 2.24 | 2.20 | 2.16 | 2.14 | 2.11 | 2.09 |
| **26** | 4.23 | 3.37 | 2.98 | 2.74 | 2.59 | 2.47 | 2.39 | 2.32 | 2.27 | 2.22 | 2.18 | 2.15 | 2.12 | 2.09 | 2.07 |
| **27** | 4.21 | 3.35 | 2.96 | 2.73 | 2.57 | 2.46 | 2.37 | 2.31 | 2.25 | 2.20 | 2.17 | 2.13 | 2.10 | 2.08 | 2.06 |
| **28** | 4.20 | 3.34 | 2.95 | 2.71 | 2.56 | 2.45 | 2.36 | 2.29 | 2.24 | 2.19 | 2.15 | 2.12 | 2.09 | 2.06 | 2.04 |
| **29** | 4.18 | 3.33 | 2.93 | 2.70 | 2.55 | 2.43 | 2.35 | 2.28 | 2.22 | 2.18 | 2.14 | 2.10 | 2.08 | 2.05 | 2.03 |
| **30** | 4.17 | 3.32 | 2.92 | 2.69 | 2.53 | 2.42 | 2.33 | 2.27 | 2.21 | 2.16 | 2.13 | 2.09 | 2.06 | 2.04 | 2.01 |
| **31** | 4.16 | 3.30 | 2.91 | 2.68 | 2.52 | 2.41 | 2.32 | 2.25 | 2.20 | 2.15 | 2.11 | 2.08 | 2.05 | 2.03 | 2.00 |
| **32** | 4.15 | 3.29 | 2.90 | 2.67 | 2.51 | 2.40 | 2.31 | 2.24 | 2.19 | 2.14 | 2.10 | 2.07 | 2.04 | 2.01 | 1.99 |
| **33** | 4.14 | 3.28 | 2.89 | 2.66 | 2.50 | 2.39 | 2.30 | 2.23 | 2.18 | 2.13 | 2.09 | 2.06 | 2.03 | 2.00 | 1.98 |
| **34** | 4.13 | 3.28 | 2.88 | 2.65 | 2.49 | 2.38 | 2.29 | 2.23 | 2.17 | 2.12 | 2.08 | 2.05 | 2.02 | 1.99 | 1.97 |
| **35** | 4.12 | 3.27 | 2.87 | 2.64 | 2.49 | 2.37 | 2.29 | 2.22 | 2.16 | 2.11 | 2.07 | 2.04 | 2.01 | 1.99 | 1.96 |
| **36** | 4.11 | 3.26 | 2.87 | 2.63 | 2.48 | 2.36 | 2.28 | 2.21 | 2.15 | 2.11 | 2.07 | 2.03 | 2.00 | 1.98 | 1.95 |
| **37** | 4.11 | 3.25 | 2.86 | 2.63 | 2.47 | 2.36 | 2.27 | 2.20 | 2.14 | 2.10 | 2.06 | 2.02 | 2.00 | 1.97 | 1.95 |
| **38** | 4.10 | 3.24 | 2.85 | 2.62 | 2.46 | 2.35 | 2.26 | 2.19 | 2.14 | 2.09 | 2.05 | 2.02 | 1.99 | 1.96 | 1.94 |
| **39** | 4.09 | 3.24 | 2.85 | 2.61 | 2.46 | 2.34 | 2.26 | 2.19 | 2.13 | 2.08 | 2.04 | 2.01 | 1.98 | 1.95 | 1.93 |
| **40** | 4.08 | 3.23 | 2.84 | 2.61 | 2.45 | 2.34 | 2.25 | 2.18 | 2.12 | 2.08 | 2.04 | 2.00 | 1.97 | 1.95 | 1.92 |
| **41** | 4.08 | 3.23 | 2.83 | 2.60 | 2.44 | 2.33 | 2.24 | 2.17 | 2.12 | 2.07 | 2.03 | 2.00 | 1.97 | 1.94 | 1.92 |
| **42** | 4.07 | 3.22 | 2.83 | 2.59 | 2.44 | 2.32 | 2.24 | 2.17 | 2.11 | 2.06 | 2.03 | 1.99 | 1.96 | 1.94 | 1.91 |
| **43** | 4.07 | 3.21 | 2.82 | 2.59 | 2.43 | 2.32 | 2.23 | 2.16 | 2.11 | 2.06 | 2.02 | 1.99 | 1.96 | 1.93 | 1.91 |
| **44** | 4.06 | 3.21 | 2.82 | 2.58 | 2.43 | 2.31 | 2.23 | 2.16 | 2.10 | 2.05 | 2.01 | 1.98 | 1.95 | 1.92 | 1.90 |
| **45** | 4.06 | 3.20 | 2.81 | 2.58 | 2.42 | 2.31 | 2.22 | 2.15 | 2.10 | 2.05 | 2.01 | 1.97 | 1.94 | 1.92 | 1.89 |

| **df untuk****penyebut (N2)** | **df untuk pembilang (N1)** |
| --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| **46** | 4.05 | 3.20 | 2.81 | 2.57 | 2.42 | 2.30 | 2.22 | 2.15 | 2.09 | 2.04 | 2.00 | 1.97 | 1.94 | 1.91 | 1.89 |
| **47** | 4.05 | 3.20 | 2.80 | 2.57 | 2.41 | 2.30 | 2.21 | 2.14 | 2.09 | 2.04 | 2.00 | 1.96 | 1.93 | 1.91 | 1.88 |
| **48** | 4.04 | 3.19 | 2.80 | 2.57 | 2.41 | 2.29 | 2.21 | 2.14 | 2.08 | 2.03 | 1.99 | 1.96 | 1.93 | 1.90 | 1.88 |
| **49** | 4.04 | 3.19 | 2.79 | 2.56 | 2.40 | 2.29 | 2.20 | 2.13 | 2.08 | 2.03 | 1.99 | 1.96 | 1.93 | 1.90 | 1.88 |
| **50** | 4.03 | 3.18 | 2.79 | 2.56 | 2.40 | 2.29 | 2.20 | 2.13 | 2.07 | 2.03 | 1.99 | 1.95 | 1.92 | 1.89 | 1.87 |
| **51** | 4.03 | 3.18 | 2.79 | 2.55 | 2.40 | 2.28 | 2.20 | 2.13 | 2.07 | 2.02 | 1.98 | 1.95 | 1.92 | 1.89 | 1.87 |
| **52** | 4.03 | 3.18 | 2.78 | 2.55 | 2.39 | 2.28 | 2.19 | 2.12 | 2.07 | 2.02 | 1.98 | 1.94 | 1.91 | 1.89 | 1.86 |
| **53** | 4.02 | 3.17 | 2.78 | 2.55 | 2.39 | 2.28 | 2.19 | 2.12 | 2.06 | 2.01 | 1.97 | 1.94 | 1.91 | 1.88 | 1.86 |
| **54** | 4.02 | 3.17 | 2.78 | 2.54 | 2.39 | 2.27 | 2.18 | 2.12 | 2.06 | 2.01 | 1.97 | 1.94 | 1.91 | 1.88 | 1.86 |
| **55** | 4.02 | 3.16 | 2.77 | 2.54 | 2.38 | 2.27 | 2.18 | 2.11 | 2.06 | 2.01 | 1.97 | 1.93 | 1.90 | 1.88 | 1.85 |
| **56** | 4.01 | 3.16 | 2.77 | 2.54 | 2.38 | 2.27 | 2.18 | 2.11 | 2.05 | 2.00 | 1.96 | 1.93 | 1.90 | 1.87 | 1.85 |
| **57** | 4.01 | 3.16 | 2.77 | 2.53 | 2.38 | 2.26 | 2.18 | 2.11 | 2.05 | 2.00 | 1.96 | 1.93 | 1.90 | 1.87 | 1.85 |
| **58** | 4.01 | 3.16 | 2.76 | 2.53 | 2.37 | 2.26 | 2.17 | 2.10 | 2.05 | 2.00 | 1.96 | 1.92 | 1.89 | 1.87 | 1.84 |
| **59** | 4.00 | 3.15 | 2.76 | 2.53 | 2.37 | 2.26 | 2.17 | 2.10 | 2.04 | 2.00 | 1.96 | 1.92 | 1.89 | 1.86 | 1.84 |
| **60** | 4.00 | 3.15 | 2.76 | 2.53 | 2.37 | 2.25 | 2.17 | 2.10 | 2.04 | 1.99 | 1.95 | 1.92 | 1.89 | 1.86 | 1.84 |
| **61** | 4.00 | 3.15 | 2.76 | 2.52 | 2.37 | 2.25 | 2.16 | 2.09 | 2.04 | 1.99 | 1.95 | 1.91 | 1.88 | 1.86 | 1.83 |
| **62** | 4.00 | 3.15 | 2.75 | 2.52 | 2.36 | 2.25 | 2.16 | 2.09 | 2.03 | 1.99 | 1.95 | 1.91 | 1.88 | 1.85 | 1.83 |
| **63** | 3.99 | 3.14 | 2.75 | 2.52 | 2.36 | 2.25 | 2.16 | 2.09 | 2.03 | 1.98 | 1.94 | 1.91 | 1.88 | 1.85 | 1.83 |
| **64** | 3.99 | 3.14 | 2.75 | 2.52 | 2.36 | 2.24 | 2.16 | 2.09 | 2.03 | 1.98 | 1.94 | 1.91 | 1.88 | 1.85 | 1.83 |
| **65** | 3.99 | 3.14 | 2.75 | 2.51 | 2.36 | 2.24 | 2.15 | 2.08 | 2.03 | 1.98 | 1.94 | 1.90 | 1.87 | 1.85 | 1.82 |
| **66** | 3.99 | 3.14 | 2.74 | 2.51 | 2.35 | 2.24 | 2.15 | 2.08 | 2.03 | 1.98 | 1.94 | 1.90 | 1.87 | 1.84 | 1.82 |
| **67** | 3.98 | 3.13 | 2.74 | 2.51 | 2.35 | 2.24 | 2.15 | 2.08 | 2.02 | 1.98 | 1.93 | 1.90 | 1.87 | 1.84 | 1.82 |
| **68** | 3.98 | 3.13 | 2.74 | 2.51 | 2.35 | 2.24 | 2.15 | 2.08 | 2.02 | 1.97 | 1.93 | 1.90 | 1.87 | 1.84 | 1.82 |
| **69** | 3.98 | 3.13 | 2.74 | 2.50 | 2.35 | 2.23 | 2.15 | 2.08 | 2.02 | 1.97 | 1.93 | 1.90 | 1.86 | 1.84 | 1.81 |
| **70** | 3.98 | 3.13 | 2.74 | 2.50 | 2.35 | 2.23 | 2.14 | 2.07 | 2.02 | 1.97 | 1.93 | 1.89 | 1.86 | 1.84 | 1.81 |
| **71** | 3.98 | 3.13 | 2.73 | 2.50 | 2.34 | 2.23 | 2.14 | 2.07 | 2.01 | 1.97 | 1.93 | 1.89 | 1.86 | 1.83 | 1.81 |
| **72** | 3.97 | 3.12 | 2.73 | 2.50 | 2.34 | 2.23 | 2.14 | 2.07 | 2.01 | 1.96 | 1.92 | 1.89 | 1.86 | 1.83 | 1.81 |
| **73** | 3.97 | 3.12 | 2.73 | 2.50 | 2.34 | 2.23 | 2.14 | 2.07 | 2.01 | 1.96 | 1.92 | 1.89 | 1.86 | 1.83 | 1.81 |
| **74** | 3.97 | 3.12 | 2.73 | 2.50 | 2.34 | 2.22 | 2.14 | 2.07 | 2.01 | 1.96 | 1.92 | 1.89 | 1.85 | 1.83 | 1.80 |
| **75** | 3.97 | 3.12 | 2.73 | 2.49 | 2.34 | 2.22 | 2.13 | 2.06 | 2.01 | 1.96 | 1.92 | 1.88 | 1.85 | 1.83 | 1.80 |
| **76** | 3.97 | 3.12 | 2.72 | 2.49 | 2.33 | 2.22 | 2.13 | 2.06 | 2.01 | 1.96 | 1.92 | 1.88 | 1.85 | 1.82 | 1.80 |
| **77** | 3.97 | 3.12 | 2.72 | 2.49 | 2.33 | 2.22 | 2.13 | 2.06 | 2.00 | 1.96 | 1.92 | 1.88 | 1.85 | 1.82 | 1.80 |
| **78** | 3.96 | 3.11 | 2.72 | 2.49 | 2.33 | 2.22 | 2.13 | 2.06 | 2.00 | 1.95 | 1.91 | 1.88 | 1.85 | 1.82 | 1.80 |
| **79** | 3.96 | 3.11 | 2.72 | 2.49 | 2.33 | 2.22 | 2.13 | 2.06 | 2.00 | 1.95 | 1.91 | 1.88 | 1.85 | 1.82 | 1.79 |
| **80** | 3.96 | 3.11 | 2.72 | 2.49 | 2.33 | 2.21 | 2.13 | 2.06 | 2.00 | 1.95 | 1.91 | 1.88 | 1.84 | 1.82 | 1.79 |
| **81** | 3.96 | 3.11 | 2.72 | 2.48 | 2.33 | 2.21 | 2.12 | 2.05 | 2.00 | 1.95 | 1.91 | 1.87 | 1.84 | 1.82 | 1.79 |
| **82** | 3.96 | 3.11 | 2.72 | 2.48 | 2.33 | 2.21 | 2.12 | 2.05 | 2.00 | 1.95 | 1.91 | 1.87 | 1.84 | 1.81 | 1.79 |
| **83** | 3.96 | 3.11 | 2.71 | 2.48 | 2.32 | 2.21 | 2.12 | 2.05 | 1.99 | 1.95 | 1.91 | 1.87 | 1.84 | 1.81 | 1.79 |
| **84** | 3.95 | 3.11 | 2.71 | 2.48 | 2.32 | 2.21 | 2.12 | 2.05 | 1.99 | 1.95 | 1.90 | 1.87 | 1.84 | 1.81 | 1.79 |
| **85** | 3.95 | 3.10 | 2.71 | 2.48 | 2.32 | 2.21 | 2.12 | 2.05 | 1.99 | 1.94 | 1.90 | 1.87 | 1.84 | 1.81 | 1.79 |
| **86** | 3.95 | 3.10 | 2.71 | 2.48 | 2.32 | 2.21 | 2.12 | 2.05 | 1.99 | 1.94 | 1.90 | 1.87 | 1.84 | 1.81 | 1.78 |
| **87** | 3.95 | 3.10 | 2.71 | 2.48 | 2.32 | 2.20 | 2.12 | 2.05 | 1.99 | 1.94 | 1.90 | 1.87 | 1.83 | 1.81 | 1.78 |
| **88** | 3.95 | 3.10 | 2.71 | 2.48 | 2.32 | 2.20 | 2.12 | 2.05 | 1.99 | 1.94 | 1.90 | 1.86 | 1.83 | 1.81 | 1.78 |
| **89** | 3.95 | 3.10 | 2.71 | 2.47 | 2.32 | 2.20 | 2.11 | 2.04 | 1.99 | 1.94 | 1.90 | 1.86 | 1.83 | 1.80 | 1.78 |
| **90** | 3.95 | 3.10 | 2.71 | 2.47 | 2.32 | 2.20 | 2.11 | 2.04 | 1.99 | 1.94 | 1.90 | 1.86 | 1.83 | 1.80 | 1.78 |