

PROTEKSI ISI LAPORAN KEMAJUAN PENELITIAN

Dilarang menyalin, menyimpan, memperbanyak sebagian atau seluruh isi laporan ini dalam bentuk apapun kecuali oleh peneliti dan pengelola administrasi penelitian.

LAPORAN KEMAJUAN PENELITIAN

Informasi Data Usulan Penelitian

1. IDENTITAS PENELITIAN

A. JUDUL PENELITIAN

Predicting the Level of Resilience of Islamic Banking in Indonesia: An Application of Genetic Algorithm and Cobb-Douglas Approaches

B. SKEMA, BIDANG, TEMA, DAN TOPIK PENELITIAN

Skema Penelitian	Bidang Fokus Penelitian	Tema Penelitian	Topik Penelitian
Penelitian Terapan	Sosial Humaniora - Seni Budaya - Pendidikan	Ekonomi dan sumber daya manusia	Kewirausahaan, koperasi, dan UMKM.

C. KOLABORASI DAN RUMPUN ILMU PENELITIAN

Jenis Kolaborasi Penelitian	Rumpun Ilmu 1	Rumpun Ilmu 2	Rumpun Ilmu 3
Kolaboratif Luar Negri	ILMU EKONOMI	ILMU EKONOMI	Ekonomi Syariah

D. WAKTU PELAKSANAAN

Tahun Usulan	Tahun Pelaksanaan	Lama Penelitian
2022	2023	1

E. ANCOR RESEARCH

Anchor Research	Topik Anchor
Dimas Bagus Wiranatakusuma, Dr., S.E., M.Ec., CRP	Formulation of a mechanism to monitor the development of Islamic financial institutions: Operasionalisasi Ketahanan Lembaga Keuangan Syariah

2. IDENTITAS PENELITIAN

Nama	Peran	Tugas
Dimas Bagus Wiranatakusuma, Dr., S.E., M.Ec., CRP	Ketua Pengusul	
Zaini Muchlis, Lc., MIRKH.	Dosen Pembimbing	Membantu dalam formulasi ide dan diskusi
Ridwan Naufalhadi Budiutama	Mahasiswa Bimbingan	Membantu dalam koleksi data dan administratif

3. MITRA KERJASAMA PENELITIAN (JIKA ADA)

Pelaksanaan penelitian dapat melibatkan mitra kerjasama, yaitu mitra kerjasama dalam melaksanakan penelitian, mitra sebagai calon pengguna hasil penelitian, atau mitra investor

Mitra	Nama Mitra	Kepakaran
Universiti Malaysia Terengganu	Dr. Jumadil Saputra	Quantitative Economics

4. KOLABORASI PENELITIAN (JIKA ADA)

Mitra	NIDN/NIK	Instansi
Dr. Jumadil Saputra	C7979016	Universiti Malaysia Terengganu

5. LUARAN DAN TARGET CAPAIAN

Luaran Wajib

Tahun	Jenis Luaran
1	Publikasi Jurnal Internasional terindeks SCOPUS,
1	Buku Referensi

Luaran Tambahan

Tahun	Jenis Luaran
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6. KLUSTER

Kluster	Sub Kluster	Group Riset	Mata kuliah
			--

7. ANGGARAN

Rencana anggaran biaya penelitian mengacu pada PMK yang berlaku dengan besaran minimum dan maksimum sebagaimana diatur pada buku Panduan Penelitian dan Pengabdian kepada Masyarakat.

Total Keseluruhan RAB Rp. 30,000,000

Tahun 1 Total Rp. 30,000,000

Jenis Pembelian	Komponen	Item	Satuan	Vol.	Harga Satuan	Total
BAHAN	ATK (Kertas/Tinta/Alat Tulis dll)	Kertas	Paket	4	Rp. 50,000	Rp. 200,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Biaya Luaran KI (Paten, Hak Cipta, dll)	Tahapan	Paket	15	Rp. 1,000,000	Rp. 15,000,000
PENGUMPULAN DATA	Transportasi/BBM	Liter	OK(Kali)	150	Rp. 10,000	Rp. 1,500,000
ANALISIS DATA	Biaya Konsumsi Rapat	Makan Minum	OH	10	Rp. 120,000	Rp. 1,200,000
ANALISIS DATA	Honorarium Analisis Data	Bulan	OK(Kali)	7	Rp. 1,100,000	Rp. 7,700,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Honorarium Penyusunan Buku Termasuk Book Chapter	Bab Buku	OK(Kali)	8	Rp. 550,000	Rp. 4,400,000

8. LEMBAR PENGESAHAN

HALAMAN PENGESAHAN LAPORAN KEMAJUAN PENELITIAN SKEMA:

Judul : Predicting the Level of Resilience of Islamic Banking in Indonesia: An Application of Genetic Algorithm and Cobb-Douglas Approaches
 Peneliti/Pelaksana : Dimas Bagus Wiranatakusuma, Dr., S.E., M.Ec., CRP
 NIDN : 0516108502
 Jabatan Fungsional : Lektor
 Program Studi/Fakultas : Ekonomi
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Anggota

Nama : Zaini Muchlis, Lc., MIRKH.
 NIDN : 0519048501
 Jabatan Fungsional : Asisten Ahli
 Program Studi/Fakultas : Ekonomi

Nama : Ridwan Naufalhadi Budiutama
 NIM : 20200430079
 Prodi : S1 Ekonomi

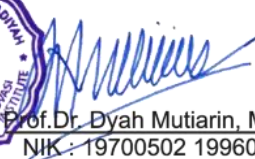
Mitra : Universiti Malaysia Terengganu
 Nama Mitra : Dr. Jumadil Saputra
 Kepakaran : Quantitative Economics

Nama : Dr. Jumadil Saputra
NIK : C7979016
Institusi : Universiti Malaysia Terengganu

Biaya : Rp. 30,000,000

Yogyakarta, 09 Juni 2023

Mengetahui,
Kepala LRI,



Prof. Dr. Dyah Mutiarin, MS.i
NIK : 19700502 199603

9. RINGKASAN

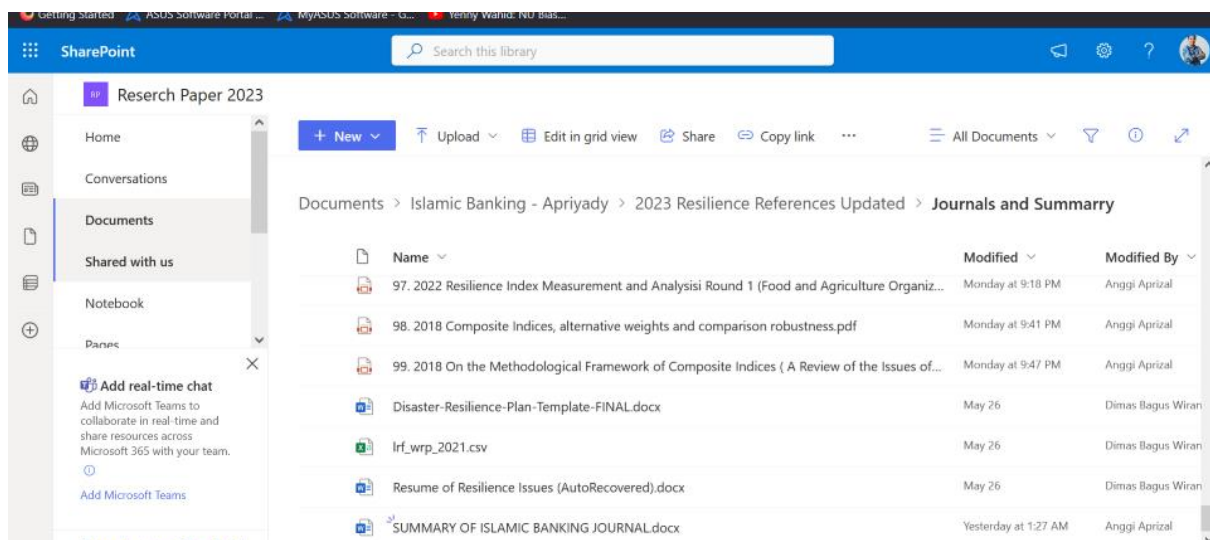
In the last two decades, the financial crisis in the world has continued to occur repeatedly. The problems urge economists to understand the nature of the crisis and how to strengthen the financial system to withstand when the crisis comes. This study aims to predict the resilience level of Islamic Banking in Indonesia using the Genetic Algorithm and Cobb-Douglas Models. This study uses a time-series approach. The data were collected from internal banking in Indonesia from 2010 to 2022. Several macroeconomic variables are used to predict the backward dataset until the end of 2023. The findings are expected to give policy references to policymakers in responding to the existing condition, particularly on safeguarding the Islamic banking industry in Indonesia.

10. KEYWORDS

Islamic banking, resilience, Indonesia, Algorithm Approach and Cobb-Douglas Model

11. HASIL PELAKSANAAN PENELITIAN

1. Mengumpulkan beberapa literature terkait



The screenshot shows a SharePoint library interface. The breadcrumb path is: Documents > Islamic Banking - Apriyady > 2023 Resilience References Updated > Journals and Summary. The document list includes:

Name	Modified	Modified By
97. 2022 Resilience Index Measurement and Analisis Round 1 (Food and Agriculture Organiz...	Monday at 9:18 PM	Anggi Aprizal
98. 2018 Composite Indices, alternative weights and comparison robustness.pdf	Monday at 9:41 PM	Anggi Aprizal
99. 2018 On the Methodological Framework of Composite Indices (A Review of the Issues of...	Monday at 9:47 PM	Anggi Aprizal
Disaster-Resilience-Plan-Template-FINAL.docx	May 26	Dimas Bagus Wiran
lrf_wrp_2021.csv	May 26	Dimas Bagus Wiran
Resume of Resilience Issues (AutoRecovered).docx	May 26	Dimas Bagus Wiran
SUMMARY OF ISLAMIC BANKING JOURNAL.docx	Yesterday at 1:27 AM	Anggi Aprizal

12. STATUS LUARAN

1. Draft Jurnal → Masih proses menyelesaikan data analisis
2. Buku Referensi → tahapan menyelesaikan buku modul (sdh selesai buku modul sebagai tahapan ke buku referensi)

13. PERAN MITRA

1. membantu dalam konteks metodologi
2. membantu dalam studi literature

14. KENDALA PELAKSANAAN PENELITIAN

1. Kendala dalam menyelesaikan prototype dalam bentuk aplikasi
2. Kendala dalam penyelesaian buku karena menintegrasikan dengan analisis excel, sehingga agak teknis

15. RENCANA TAHAPAN SELANJUTNYA

1. Menyelesaikan analisis data sampai akhir June 2023
2. menyelesaikan buku referensi hingga akhir juli 2023

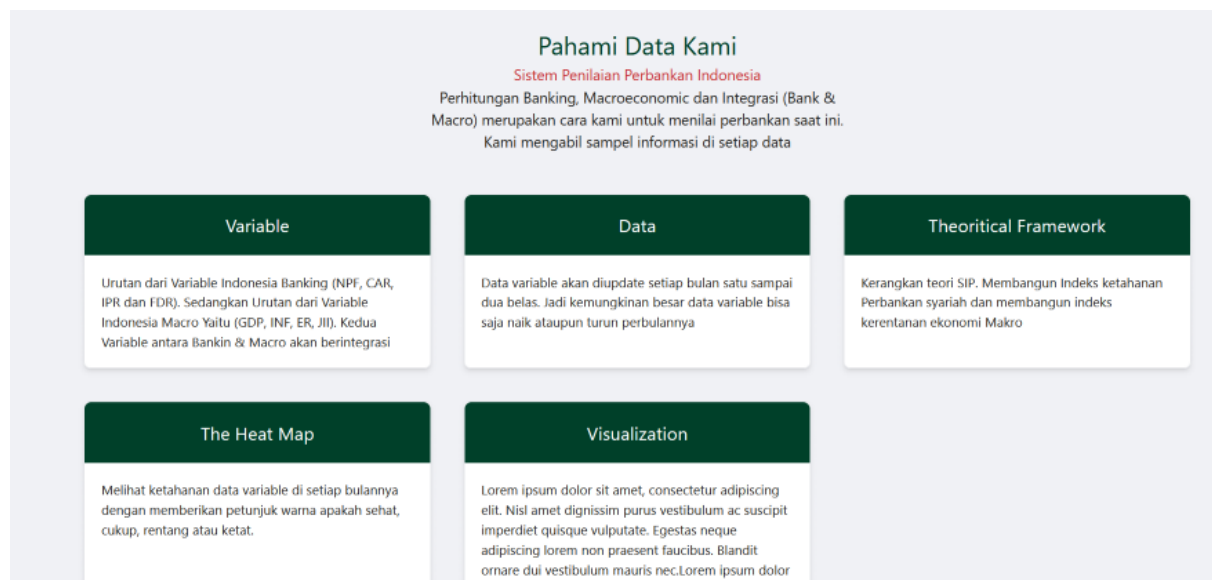
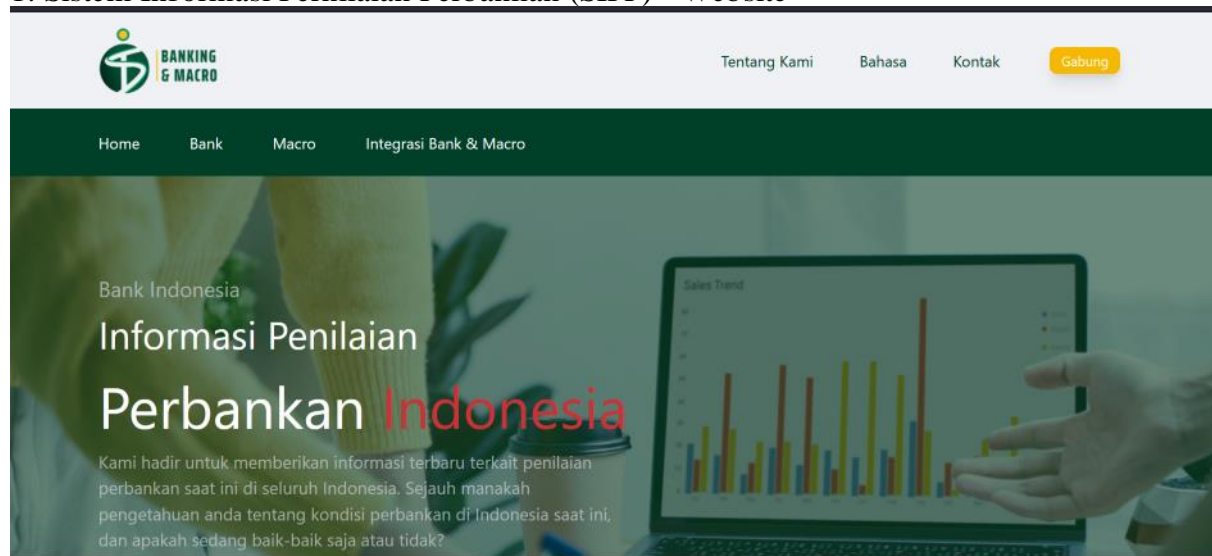
16. DAFTAR PUSTAKA

- Al-Nasser Mohammed, S. A. S., & Muhammed, D. J. (2017). Financial crisis, legal origin, economic status and multi-bank performance indicators Evidence from Islamic banks in developing countries. *Journal of Applied Accounting Research*, 18(2), 208–222. <https://doi.org/10.1108/JAAR-07-2014-0065>
2. A. Ahmad and M. Khan (2015) “Estimating the Cobb-Douglas Production Function,” *International Journal of Research in Business Studies and Management*, vol. 2, no. 5, pp. 32-33
3. Berry, C., Ryan-Collins, J., & Greenham, T. (2015). *Financial system resilience index: building a strong financial system* (M. Murphy (ed.); 1st ed.). New Economics Foundation. www.friendsprovidentfoundation.org
4. C. W. Coma and P. H. Douglas. (1928) “A theory of production,” In *Proceedings of the Fortieth Annual Meeting of the American Economic Association*, March 1928, pp. 165-170.
5. Claessens, S., & Van Horen, N. (2015). The Impact of the Global Financial Crisis on Banking Globalization. *IMF Economic Review*, 63(4), 868–918. <https://doi.org/10.1057/imfer.2015.38>
6. Chattha, J. A., & Archer, S. (2015). Solvency stress testing of Islamic commercial banks: Assessing the stability and resilience. *Journal of Islamic Accounting and Business Research*, 7(2), 112–147. <https://doi.org/10.1108/JIABR-09-2014-0031>
7. Dymski, G. a. (2010). *Understanding the Subprime Crisis: institutional evolution and theoretical views*.
8. Frydl, E. J. (1999). The Length and Cost of Banking Crises. In *IMF Working Papers* (Vol. 99, Issue 30, pp. 1–32). <https://doi.org/10.5089/9781451844894.001>

9. Hashem, S. Q., & Abdeljawad, I. (2018). *Islamic Banks' Resilience to Systemic Risks: Myth or Reality-Evidence from Bangladesh*. 37–68. <https://doi.org/10.1108/s1569-376720180000019003>
10. J. Felipe and F. G. Adams. (2005) "The Estimation of the Cobb-Douglas Function: A Retrospective View," *Eastern Economic Journal*, vol. 31, no. 3, pp. 427-445.
11. Khan, Areeba. & Muhammad, J. (2016). Financial resilience: A comparative study of Islamic and conventional banks. *Global Journal of Business and Social Science Review*, 4(2), 1–148.
12. Smolo, E., & Mirakhor, A. (2010). The global financial crisis and its implications for the Islamic financial industry. *International Journal of Islamic and Middle Eastern Finance and Management*, 3(4), 372–385. <https://doi.org/10.1108/17538391011093306>
13. Wiranatakusuma, D. B. (2018). Constructing Islamic Banking Resilience Index in Indonesia. *Journal of Islamic Monetary Economics and Finance*, 3, 59–82. <https://doi.org/10.21098/jimf.v3i0.760>

17. LAMPIRAN-LAMPIRAN

1. Sistem Informasi Penilaian Perbankan (SIPP) - Website



2. Modul Ketahanan Perbankan Syariah (100 Halaman) → Salah satu bahan dalam Menyusun buku referensi



MODUL ISLAMIC BANKING PRACTICES



**INTERNATIONAL PROGRAM FOR ISLAMIC ECONOMICS AND FINANCE (IPIEF)
DEPARTMENT OF ECONOMICS,
FACULTY OF ECONOMICS AND BUSINESS
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA**

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