

IQTISODIYOT va TARAQQIYOT

Ijtimoiy, iqtisodiy, siyosiy, ilmiy, ommabop jurnal



- 08.00.01 Iqtisodiyot nazariyasi
- 08.00.02 Makroiqtisodiyot
- 08.00.03 Sanoat iqtisodiyoti
- 08.00.04 Qishloq xo'jaligi iqtisodiyoti
- 08.00.05 Xizmat ko'rsatish tarmoqlari iqtisodiyoti
- 08.00.06 Ekonometrika va statistika
- 08.00.07 Moliya, pul muomalasi va kredit
- 08.00.08 Buxgalteriya hisobi, iqtisodiy tahlil va audit
- 08.00.09 Jahon iqtisodiyoti

- 08.00.10 Demografiya. Mehnat iqtisodiyoti
- 08.00.11 Marketing
- 08.00.12 Mintaqaviy iqtisodiyot
- 08.00.13 Menejment
- 08.00.14 Iqtisodiyotda axborot tizimlari va texnologiyalari
- 08.00.15 Tadbirkorlik va kichik biznes iqtisodiyoti
- 08.00.16 Raqamli iqtisodiyot va xalqaro raqamli integratsiya
- 08.00.17 Turizm va mehmonxona faoliyati



Yashil

IQTISODIYOT va TARAQQIYOT

Ijtimoiy, iqtisodiy, siyosiy, ilmiy, ommabop jurnal

Bosh muharrir:

Sharipov Qo'ng'irotboy Avezimbetovich

Elektron nashr. 424 sahifa, 30-iyun, 2023-yil.

Bosh muharrir o'rinbosari:

Karimov Norboy G'aniyevich

Muharrir:

Qurbonov Sherzod Ismatillayevich

Tahrir hay'ati:

Rae Kvon Chung, Janubiy Korea, TDIU faxriy professori, "Nobel" mukofoti laureati

Salimov Oqil Umrzoqovich, O'zbekiston fanlar akademiyasi akademigi

Abdurahmonov Qalandar Xodjayevich, O'zbekiston fanlar akademiyasi akademigi

Osman Mesten, Turkiya parlamenti a'zosi, Turkiya – O'zbekiston do'stlik jamiyati rahbari

Toshkulov Abduqodir Hamidovich, i.f.d., prof., O'zbekiston Respublikasi Prezidentining yoshlar, fan, ta'lim, sog'liqni saqlash, madaniyat va sport masalalari bo'yicha maslahatchisi o'rinbosari

Buzrukxonov Sarvarxon Munavvarxonovich, i.f.d., O'ZR Oliy ta'lim, fan va innovatsiyalar vaziri o'rinbosari

Sharipov Qo'ng'irotboy Avezimbetovich, t.f.d., prof., TDIU rektori

Oblamuradov Narzulla Naimovich, i.f.n., dots., O'ZR Tabiat resurslari vaziri o'rinbosari

Djumaniyazov Maqsud Allanazarovich, Qoraqalpog'iston Resp. Tabiat resurslari qo'mitasi raisi

Axmedov Durbek Kudratillayevich, i.f.d., prof., O'ZR Oliy Majlisi qonunchilik palatasi deputati

Utayev Uktam Choriyevich, O'ZR Bosh prokuraturasi boshqarma boshlig'i o'rinbosari

Ochilov Farxod, O'ZR Bosh prokuraturasi iqtisodiy jinoyatlarga qarshi kurashish departamenti bo'limi boshlig'i

Eshov Mansur Po'latovich, i.f.d., prof., TDIU Akademik faoliyat bo'yicha prorektori

Xudoyqulov Sadirdin Karimovich, i.f.d., prof., TDIU YoMMMB birinchi prorektori

Abdurahmanova Gulnora Qalandarovna, i.f.d., prof., TDIU Ilmiy ishlar va innovatsiyalar bo'yicha prorektori

Kalonov Muxiddin Baxritdinovich, i.f.d., prof., "O'IRIAM" ilmiy tadqiqot markazi direktori – prorektor

Yuldashev Maqsud Abdullayevich, p.f.d., prof., TDIU Moliya-iqtisod ishlari bo'yicha prorektori

Karimov Norboy G'aniyevich, i.f.d., prof., TDIU huzuridagi PKQTMO tarmoq markazi direktori

Hakimov Nazar Hakimovich, f.f.d. TDIU profesor

Yuldashev Mutallib Ibragimovich, i.f.d., TMI professori

Samadov Asqarjon Nishonovich, i.f.n., TDIU Marketing kafedrasini professori

Slizovskiy Dmitriy Yegorovich, t.f.d., Rossiya xalqlar do'stligi universiteti professori

Mustafakulov Sherzod Igamberdiyevich, i.f.d., prof., Xalqaro "Nordik" universiteti rektori

Aliyev Bekdavlat Aliyevich, f.f.d., TDIU professori

Po'latov Baxtiyor Alimovich, t.f.d., prof., Atrof-muhit va tabiatni muhofaza qilish texnologiyalari ilmiy-tadqiqot instituti

Axmedov Javohir Jamolovich, i.f.f.d., "El-yurt umidi" jamg'armasi ijrochi direktori o'rinbosari

Isakov Janabay Yakubbayevich, i.f.d., TDIU professori

Toxirov Jaloliddin Ochil o'g'li, t.f.f.d., Toshkent arxitektura-qurilish universiteti katta o'qituvchisi

Kamilova Iroda Xusniddinova, i.f.f.d., TDIU dotsenti

Nosirova Nargiza Jamoliddin qizi, i.f.f.d., TDIU dotsenti

Sevil Piriyeveva Karaman, PhD, Turkiya Anqara universiteti doktoranti

Yaxshiboyeva Laylo Abdisattorovna, TDIU katta o'qituvchisi

Rustamov Ilhomiddin, f.f.n., Farg'ona davlat universiteti dotsenti

Ekspertlar kengashi:

Hakimov Ziyodulla Ahmadovich, i.f.d, TDIU dotsenti

Tuxtabayev Jamshid Sharafetdinovich, i.f.f.d, TDIU dotsenti

Imomqulov To'liq Burxonovich, i.f.f.d, TDIU dotsenti

Muassis: "Ma'rifat-print-media" MChJ

Hamkorlarimiz: Toshkent davlat iqtisodiyot universiteti,
O'ZR Tabiat resurslari vazirligi,
O'ZR Bosh prokuraturasi huzuridagi IJQK departamenti.

Jurnalning ilmiyligi:

"Yashil iqtisodiyot va taraqqiyot"
jurnali

O'zbekiston Respublikasi
Oliy ta'lim, fan va innovatsiyalar
vazirligi huzuridagi Oliy
attestatsiya komissiyasi
rayosatining
2023-yil 1-apreldagi 336/3-sonli
qarori bilan ro'yxatdan
o'tkazilgan.



MUNDARIJA

Sanoat korxonalarida energiyadan foydalanish samaradorligini oshirishning asosiy yo'nalishlari	6
Buzrukxonov Sardorxon Sarvarxon o'g'li , mustaqil izlanuvchi	
Klasterlarni rivojlantirishda fermer xo'jaliklarining strategik boshqaruvi	11
Karimova Nilufar , tayanch doktorant	
Application of Information and Communication Technology to Promote Economic Development of Tourism Services in Uzbekistan	16
Peng Xinge , PhD Researcher	
O'zbekistonda qayta tiklanuvchi energiya manbalaridan samarali foydalanishning asosiy yo'nalishlari	21
Xotamov Ibodulla Sadullayevich , i.f.n., professor, Najmiddinov Yakhyo Fazliddin o'g'li , kafedra assistenti	
Suv ta'minot korxonalarida biznes jarayonlari bo'yicha boshqaruv hisobi tizimida hisob yuritishning xususiyatlari	28
Saidakbarov Xusniddin Abdusalomovich , PhD, katta o'qituvchi	
O'zbekiston ichki oziq-ovqat tovarlari bozorini to'ldirishning o'ziga xos xususiyatlari	31
Azlarova Munira Muhammad Amin qizi , tadqiqotchi	
Assessing the Implementation of Sustainable Practices in Higher Education Institutions to Drive the Transition towards a Green Economy: A Management Perspective	40
Kuzikulova Dilfuza	
Qualitative functional development in industrial production	49
Ziyayeva Mukhtasar Mansurdjanovna , TSUE, DSc, assistant professor	
Temir yo'l transportini mahalliyashtirishni moliyalashtirish mexanizmning hozirgi holati	54
Xamrayev Djamshid Panjiyevich , mustaqil tadqiqotchi	
Enhancing Education Management for Green Development in Engineering Programs: Strategies, Challenges, and Outcomes	61
Eshbayev Oybek , Department of English Language	
Exploring the Role of Effective Management Practices in Achieving a Sustainable Green Economy	68
Rozikov Ravshan , Department of English Language	
Enhancing Vocational Competence of Future Economists through English Language Lessons in the Context of the Green Economy	76
Kurbanova Nigina , Department of English Language	
Empirical test of regional economic innovation and development along the Belt and Road	85
Kalonov Mukhiddin Bahritdinovich , professor	
Shao Junling , PhD student, researcher	
Analysis of the Impact of Cross border Investment and International Economic Integration	90
Zhao shenghan	
Yashil iqtisodiyotni moliyalashtirishda bank moliya texnologiyalarining ahamiyati	96
Abduraximova Dilora Karimovna , PhD	
Rivojlangan mamlakatlarda bilimlar iqtisodiyoti konsepsiyasidan samarali foydalanish yo'nalishlari	101
Xasanxonova Nodira Isametdinovna , PhD	
Biznes inkubator orqali kichik biznes va xususiy tadbirkorlik subyektlarini shakllantirishda "yashil logistika" tamoyillaridan foydalanish	107
Narzullayev Shodiyor Eshpulatovich , kafedra assistenti	
Innovatsion faoliyatning asosi – intellektual salohiyat	112
Kaxorova Anora Nusratovna , kafedra assistenti	
Ijro hokimiyati organlari faoliyatini baholash mezonlari tushunchasi va turlari	118
Qahramon Usmanovich Umidullayev , yuridik fanlar bo'yicha falsafa doktori (PhD)	
Temir yo'l transportida mahalliyashtirishni moliyalashtirishning huquqiy asoslari	124
Xamrayev Djamshid Panjiyevich , mustaqil tadqiqotchisi	
Moliyaviy hisobotning xalqaro standartlari bo'yicha moliyaviy hisobot: tayyorlash va avtomatlashtirish	129
Tulayev Mirzakul Salamovich , dotsent	
O'zbekistonda kichik tadbirkorlikni rivojlantirishning samarali yo'llari	133
Sh. B. Babayev , dotsent; M. R. Qulmetov , dotsent	
Sug'urta kompaniyalari to'lov qobiliyatini kengaytirish yo'nalishlari	138
G'aniyev Shahriddin Vohidovich , professor, i. f. d. (DsC), Qarshiyev Daniyar Eshpulatovich , i. f. f. d. (PhD)	



Повышении роли цифровой трансформации банков в современном этапе развития экономики	144
Жиянова Наргиза Эсанбоена , к.э.н., проф., Азимжонова Малика Шавкат қизи , специалист первой категории	
To'qimachilik korxonalarida tejamkor ishlab chiqarishni tashkil etishda mehnat resurslari va ishlab chiqarish quvvatlaridan foydalanish samaradorligi	150
Yaxyayeva Inobat Karimovna , dotsent, PhD	
Liquidity and recent changes of government securities market in the United States, the United Kingdom and Japan.....	154
Kholikov Khamidulla Vaydulla ugli	
“История экономических учений” как основная дисциплина в подготовке конкурентоспособных кадров экономистов	160
Хакимов Назар Хакимович , доктор философских наук, профессор	
The importance of strategic management and strategic leadership	166
Reyimberdiyev Baburbek Adilbek o'g'li	
Exploring the Role of Higher Education in Fostering Green Economy Transition: A Systematic Analysis of Curriculum Integration and Skill Development.....	170
Xasanova Zarina , Department of English Language	
Inson kapitalini joriy etish tizimi va xodimlar daromadi o'rtasidagi o'zaro ta'sir tahlili.....	178
M. O. Hamroqulov , katta o'qituvchi	
Yetuk mutaxassis tayyorlash – kelajak uchun sarmoya.....	185
Farhod Bagibekovich Xalimbetov	
Analysis of new established and liquidated enterprises as a basis for jobs (On the example of Samarkand region)	188
Saidov Nurali Rakhimovich	
Basing and forecasting the priorities of introducing innovative medical services in Khorezm region.....	193
S. M. Rakhimova	
Оптимизации операционной стратегии и повышение экономического потенциала хлопково-текстильных кластеров	197
Джурабаев Отабек Джурабаевич , доцент	
Soliq to'g'risidagi qonunlarni buzganlik uchun yuridik javobgarlikka tortishning huquqiy asoslari	204
Hakimov Feruz Xurshid o'g'li , talaba	
Hayot sug'urtasining rivojlanishi va uning ijtimoiy hayotdagi o'rni	207
Baratova Dinora Alisherovna , katta o'qituvchisi	
Edge Computing texnologiyalari	213
Qulmatova S. , PhD, katta o'qituvchi; Karimov Botir , katta o'qituvchi	
Aksiyadorlik kapitalida davlat ulushini qisqartirish va xususiylashtirish holati	218
Mamatov Bahromjon Shavkatovich , PhD, dotsent	
Xususiylashtirishning ijobiy imijini shakllantirishning nazariy jihatlarini.....	223
Odilova Sitora Sayfitdin qizi , katta o'qituvchi	
Tomorqa xo'jaliklarida oziq-ovqat mahsulotlari yetishtirish hajmining prognoz ko'rsatkichlari	228
Saydullayeva Fotima Jozilovna , assistant	
O'zbekiston sug'urta bozori rivojlanishining o'ziga xos xususiyati.....	235
Xasanov Xayrulla Nasrullayevich	
O'zbekiston yoshlarida volontyorlik faoliyatini rivojlantirishning ijtimoiy-siyosiy va huquqiy mexanizmlari: jahon va mahalliy tajriba	241
Qudratov Anvarmirzo Murodillayevich , siyosiy fanlar bo'yicha falsafa doktori (PhD)	
Культурологический аспект преподавания русскоязычной литературы Казахстана в ВУЗе	247
Оспан Айзада Бейсенқызы , докторант 2 курса	
Tijorat banklarida kreditlash riskini boshqarish holati tahlili.....	251
Mirzoyev Feruz Mamurjonovich , mustaqil izlanuvchi	
Tijorat banklari aktivlarini diversifikatsiyalashning zamonaviy holati va tendensiyalari.....	259
Abdualim Abdujabbor o'g'li Abdurazzoqov , mustaqil tadqiqotchi	
Significance and prospects of using economic-mathematical models in analysis of our country's economic growth	267
Rasulov Jamshid Shokir o'g'li	
Bank daromadlilik ko'rsatkichlariga makroiqtisodiy omillar ta'siri.....	274
Madraimov Xabibulla Madaminovich , assistant o'qituvchi	



Xizmat ko'rsatish sohasini rivojlantirishning ilmiy konsepsiyalari	282
Mamatov Mamajan Axmadjonovich , i.f.n., dotsent	
Qishloq xo'jalik mahsulotlari ishlab chiqarishni rivojlantirishning makroiqtisodiy barqarorligini ta'minlash	288
Ergashova Nargiza Boboxonovna , talaba	
Budjet-soliq va pul-kredit siyosatini muvofiqlashtirishning nazariy yondashuvlari	296
Hakimjon Hakimov , tadqiqotchi	
Innovatsion-brokerlik faoliyatini rivojlantirishda moliyaviy injiniringni ahamiyatini oshirish istiqbollari	301
Saipnazarov Sherbek Shaylavbekovich , dotsent	
O'zbekistonda inson kapitalini rivojlantirishda ta'lim xizmatlari bozorining ahamiyati	306
Babadjanova Malika Ruzimovna , assistent o'qituvchi	
O'zbekiston sug'urtalovchilarining moliyaviy barqarorligini ta'minlashda qayta sug'urtaning roli	312
Kamilov Baxramjon Umardjonovich	
Shaxs ma'naviy-axloqiy tarbiyasi hamisha muhim	317
Bekdavlat Aliyev , professor, falsafa fanlari doktori	
Jismoniy shaxslar daromadini soliqqa tortishning zamonaviy tendensiyalari	321
O. T. Nurmatov , PhD	
Milliy mahsulotning mazmuni, tarkibiy qismlari va harakat shakllarini tadqiq qilishning nazariy-uslubiy asoslari	327
Abdullayev Suyun Artiqovich , O'zbekiston jahon tillari universiteti prorektori	
O'zbekiston Respublikasidagi yirik tijorat banklari kreditlash amaliyotining ekonometrik tahlil va natijalari	335
Kaxxarov Ulug'bek Xalmatovich , mustaqil izlanuvchi	
Aksiyadorlik jamiyatlari faoliyatda ichki nazorat va auditning xususiyatlari	346
Saidaxmedova Aida Mirzayevna , katta o'qituvchi	
Yangi O'zbekistonda yog'-moy korxonalari personalini boshqarishni takomillashtirish	352
D. A. Azlarova , PhD	
The Intersection of Sustainability and Economic Development: Balancing Environment and Business Needs	360
Kholikova Rukhsora Sanjarovna , PhD, Izzatulloev Bakhodir Ubaydullo ugli , student	
Davlat-xususiy sheriklikni tashkil etishning huquqiy-institutsional mexanizmlari	364
Zuhra Abdikarimova , tayanch doktorant	
Zamonaviy portfel nazariyasi asosida samarali portfelni shakllantirish	370
Sindarov Fazliddin Qahramonovich , kafedra assistenti	
Iste'molchilarning qandolat mahsulotlariga bo'lgan talablarini raqamli platformalar orqali tadqiq qilish yo'llari	376
To'ychiyeva Vasila Faxriddin qizi , assistent	
Investitsiya muhiti va faoliyati natijalarini baholash uslublari	381
B. K. Tuxliyev , professor	
Sanoat korxonalarida resurslar salohiyatini tizimli tahlil qilish – korxonalarining iqtisodiy barqarorligini ta'minlash omili sifatida	386
Madraximova Gulasal Ro'zimboy qizi , PhD	
Mintaqada kichik biznes va xususiy tadbirkorlik rivojlanishi tahlili (Xorazm viloyati misolida)	391
Aminboy Sa'dullayev , i.f.n, dotsent, Dilshod Vaisov , magistr, Farhod Egamberganov , magistr	
Xizmatlar ko'rsatish korxonalarini soliqqa tortish amaliyoti va uni takomillashtirish	397
Pardayev Jamshid Muzaffarovich , tadqiqotchi	
Asosiy kapitalga yo'naltirilgan investitsiyalar: yutuqlar, kamchiliklar va yechimlari	403
Muxitdinova Kamola Alisherovna , PhD	
Directions of attracting foreign capital and specific characteristics of the eurobond transaction	407
Gafurov Olimjon , teacher, Kholmuminov Humoyun , teacher, Abrueva Sevinch , student,	
Формирование международных систем бухгалтерского учета в условиях глобализации экономики	411
Ф. Т. Абдувахидов , доцент, А. Ю. Нурмухаммедов , доцент	
Qishloqda turizmni tashkil etishning mamlakatimiz taraqqiyotiga ta'siri	417
Jo'rayeva Nargiza Abduvohidovna , dotsent	
Public debt, poverty and economic growth of Uzbekistan	420
Mirzamakhmudov Marufjan Mahamadsharif ugli	



LIQUIDITY AND RECENT CHANGES OF GOVERNMENT SECURITIES MARKET IN THE UNITED STATES, THE UNITED KINGDOM AND JAPAN

Kholikov Khamidulla Vaydulla ugli

The Central Bank of the Republic of Uzbekistan Head specialist

Abstract: this article examines recent developments in the structure and liquidity of the major government bond markets (US, UK and Japan) and examines the liquidity of the government bond market (and related repo and futures markets), including changes in the behavior of bonds changes were analyzed. In particular, the participation of various market participants (especially dealers) and the factors of market participants' behavior were studied, as well as the factors ensuring the stability of government bond markets were determined.

Key words: Government securities, bond market, dealer, repo markets, benchmark, primary markets, market participants, dash for cash, market liquidity, the COVID-19 pandemic, bid-ask spreads, debt management offices.

Annotatsiya: ushbu maqolada asosiy davlat obligatsiyalari bozorlarining (AQSh, Buyuk Britaniya va Yaponiya) tuzilishi va likvidligidagi so'nggi o'zgarishlar ko'rib chiqildi va davlat obligatsiyalari bozorining likvidligi (va tegishli repo va fyuchers bozorlari), shu jumladan, obligatsiyalarning xatti-harakatlaridagi o'zgarishlar tahlil qilindi. Xususan, turli bozor ishtirokchilari (ayniqsa, dilerlar) ishtirok etishi va bozor ishtirokchilarining xatti-harakatlarining omillari o'rganildi, davlat obligatsiyalari bozorlarining barqarorligini ta'minlovchi omillar aniqlandi.

Kalit so'zlar: Davlat qimmatli qog'ozlari, obligatsiyalar bozori, diler, repo bozorlari, benchmark, birlamchi bozorlar, bozor ishtirokchilari, naqd pul uchun chiziq, bozor likvidligi, COVID-19 pandemiyasi, takliflar bo'yicha spreadlar, qarzlarni boshqarish idoralari.

Аннотация: в этой статье рассматриваются последние изменения в структуре и ликвидности основных рынков государственных облигаций (США, Великобритания и Япония), а также анализируется ликвидность рынка государственных облигаций (и связанных с ним рынков репо и фьючерсов), включая изменения в поведении облигаций проанализировано. В частности, изучено участие различных участников рынка (особенно дилеров) и факторы поведения участников рынка, а также определены факторы, обеспечивающие устойчивость рынков государственных облигаций.

Ключевые слова: государственные ценные бумаги, рынок облигаций, дилер, рынки РЕПО, бенчмарк, первичные рынки, участники рынка, спешка за наличными, ликвидность рынка, пандемия COVID-19, спреды bid-ask, офисы по управлению долгом.

INTRODUCTION

Changes in core government bond markets over the past decade may have made these markets more prone to liquidity imbalances in times of stress. The growth in outstanding debt combined with the greater use of government bonds by some investors for trading and hedging strategies or liquidity management purposes may have increased sensitivity to shocks. The severe dislocations experienced in the government bond market during the March 2020 turmoil were the outcome of large spikes in the demand for liquidity by a variety of market participants, especially non-banks. Unlike the typical case of being a 'safe haven' in periods of stress, this market experienced a 'dash for cash' as investors scrambled to sell highly liquid assets to fulfil their cash needs. This included sales of bonds to meet redemptions and/or margin calls, as well as to unwind leveraged positions. Overall dynamics were similar across cash and futures markets in terms of yield spikes and market liquidity deterioration. By contrast, repo markets behaved differently across relevant jurisdictions, while primary markets proved more resilient. There is limited evidence to suggest that particular market structures significantly and uniformly contributed to better outcomes. A corollary of this finding is that the resilience benefits of changes to structures seem to be context-specific and jurisdiction-dependent.

Government bond markets, particularly core markets, are crucial from a financial stability perspective given their role: (i) in financing government activities; (ii) as a 'safe haven' in periods of stress; (iii) as a benchmark for the pricing of other (risky) financial instruments; (iv) as a key collateral asset (particularly as markets have migrated towards secured lending); and (v) in capital and/or liquidity regulatory requirements for a number of financial institutions, such as banks and money market funds (MMFs)¹. These markets, yespecially for on-the-run bonds (or bonds most recently issued) and for benchmark tenors that underlie futures contracts, are usually very liquid in normal times and often more liquid than other markets in times of stress.

In March 2020, following the outbreak of the COVID-19 pandemic, many of these markets yexperienced yextreme dislocations and deteriorations in liquidity conditions, notwithstanding their usual high resilience². As part of its work programme to yenhance the resilience of non-bank financial intermediation (NBFI)³, the FSB (Financial Stability Board) committed to analyze the liquidity, structure, and resilience of core government bond markets.

LITERATURE REVIEW

The relationship between size and liquidity is complicated by the fact that size has several dimensions. In dealer markets, liquidity is often supplied by market-makers who not only provide quotes but also take positions. How far size matters for liquidity thus hinges on the various yeconomies of scale in market-making. Those managing debt in the face of fiscal surpluses yemphasize gross issuance in specific securities by concentrating issuance in fewer maturities, by holding auctions less frequently and by buying back illiquid issues. However, if important fixed costs are involved in the production of information about the future path of interest rates, the size of the whole market across maturities also matters. Similarly, if there are scale yeconomies in yextracting information from order flows, the scale of trading activity may matter⁴.

The narrowing of spread may reflect the ability of market-makers to reduce their inventory risks as trading activity rises. Nevertheless, other factors yevidently also play a role, including: holdings by government accounts and other investors who do not trade actively; the amounts outstanding of benchmark issues; the trading microstructure; taxes; arrangements for repurchase; and clearing and settlement practices⁵.

Size does seem to matter, although it is clearly not the only determinant of liquidity. The larger the outstanding stock of publicly issued central government debt, generally the higher the turnover in cash and futures trading. In addition, the higher the turnover, the better the liquidity, as measured by the bid-ask spread of benchmark 10-year issues⁶.

RESEARCH METHODOLOGY

In this article, the study of yexisting scientific research on liquidity and size of government securities market in given countries, the study of statistical data and yeconomic comparison and analysis, logical thinking, scientific abstraction, information grouping, analysis and synthesis, induction and deduction methods are widely used as research methodology.

ANALYSIS AND RESULTS

The size of core government debt increased substantially, both in absolute and relative terms, in recent years (Graph 1, top-left panel). In the US, outstanding government debt grew from about \$13.6 trillion in 2010 to \$25 trillion in 2020 (or from 90% to 131% of GDP). In the yeuro area over the same period, government debt grew from €8.3tn to €12.9tn (87% to 113% of GDP), in the UK from £1.3tn to £2.9tn (80% to 137% of GDP) and in Japan from ¥882tn to ¥1280tn (174% to 238% of GDP)⁷.

1 MMFs generally hold government bills as part of their liquid assets, although there is no yexplicit requirement for them to do so.

2 FSB, Holistic review of the March market turmoil (November 2020).

3 FSB, Yenhancing the Resilience of Non-Bank Financial Intermediation – Progress Report (November 2021) highlighting current work on NBFI.

4 Salomon Smith Barney; H Inoue, "The Structure of Government Securities Markets in G10 Countries: Summary of Questionnaire Results", in Market Liquidity: Research Findings and Selected Policy Implications, Committee on the Global Financial System, Basel, May 1999.

5 How should we design deep and liquid markets? The case of government securities, Committee on the Global Financial System (Basel, October 1999), and APEC Collaborative Initiative on the Development of Domestic Bond Markets, Compendium of Sound Practices: Guidelines to Facilitate the Development of Domestic Bond Markets in APEC Member Yeconomies (September 1999).

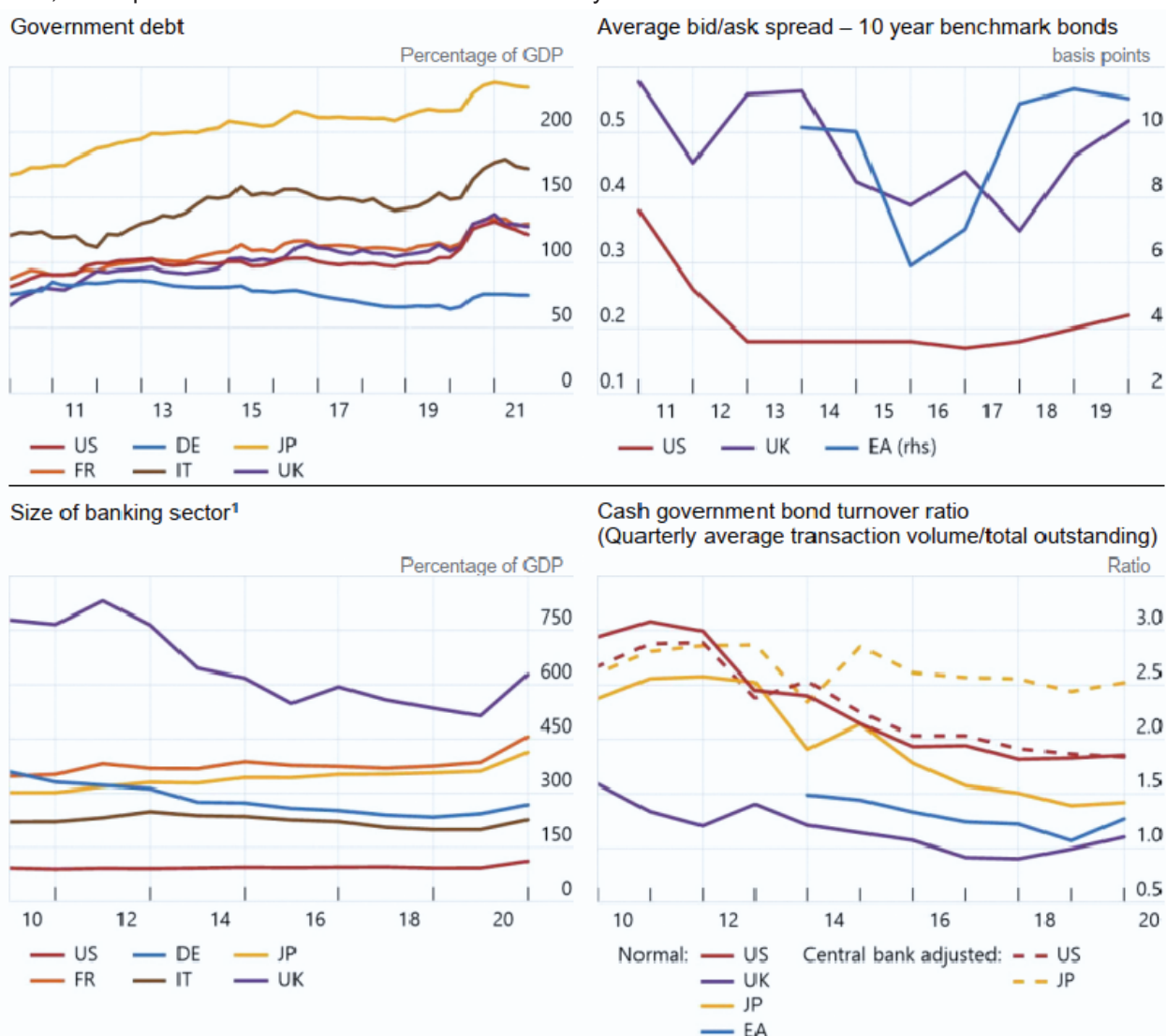
6 The bid-ask spread measures only one dimension of transaction costs since it does not measure depth or resilience of the market with respect to absorbing large order flows. Market Liquidity, Committee on the Global Financial System (Basel, March 2000), pages 13-15.

7 Data refer to central government debt and come from the BIS Statistics Warehouse and national statistical authorities.

Government bond liquidity in normal market conditions has not deteriorated between 2011 and 2020 (Graph 1, top-right panel). Widely used measures of liquidity, such as bid-ask spreads, have remained broadly stable or slightly improved over this period. Trading volumes have remained static or increased only slightly, leading to a decrease in government bond turnover ratios across all relevant jurisdictions. However, when adjusting for government debt held by local central banks, given their buy-and-hold nature, the turnover ratios remain stable or decline significantly less (Graph 1, bottom-right panel).

Government bond market structures are complex and idiosyncratic across jurisdictions. They are characterized by increased use of yelectronic trading and presence of non-bank liquidity providers in recent years.

Primary markets are structured around three main issuance channels: auctions through primary dealers; syndications directly to yend investors, and tender offers (most for short-dated bills). Auctions through primary dealers' remains the largest funding channel for debt management offices (DMOs), though discussions with DMOs highlighted the use of a range of instruments through multiple channels to yensure a broad and diversified investor base. DMOs also have some tools to contribute to market liquidity, such as repo facilities in certain cases⁸, direct purchases from dealer inventories and buybacks.



Graph 1: Developments in core government bond markets

Across all jurisdictions, cash government bond markets can be segmented between the 'interdealer' and 'dealer to customer' markets:

- Interdealer markets are predominately yelectronic, using request for quote (RFQ) or central limit order book (CLOB) protocols, although some jurisdictions (e.g. France and Germany) remain primarily or partly voice brokered. Within the interdealer market, traditional bank dealers remain the primary liquidity

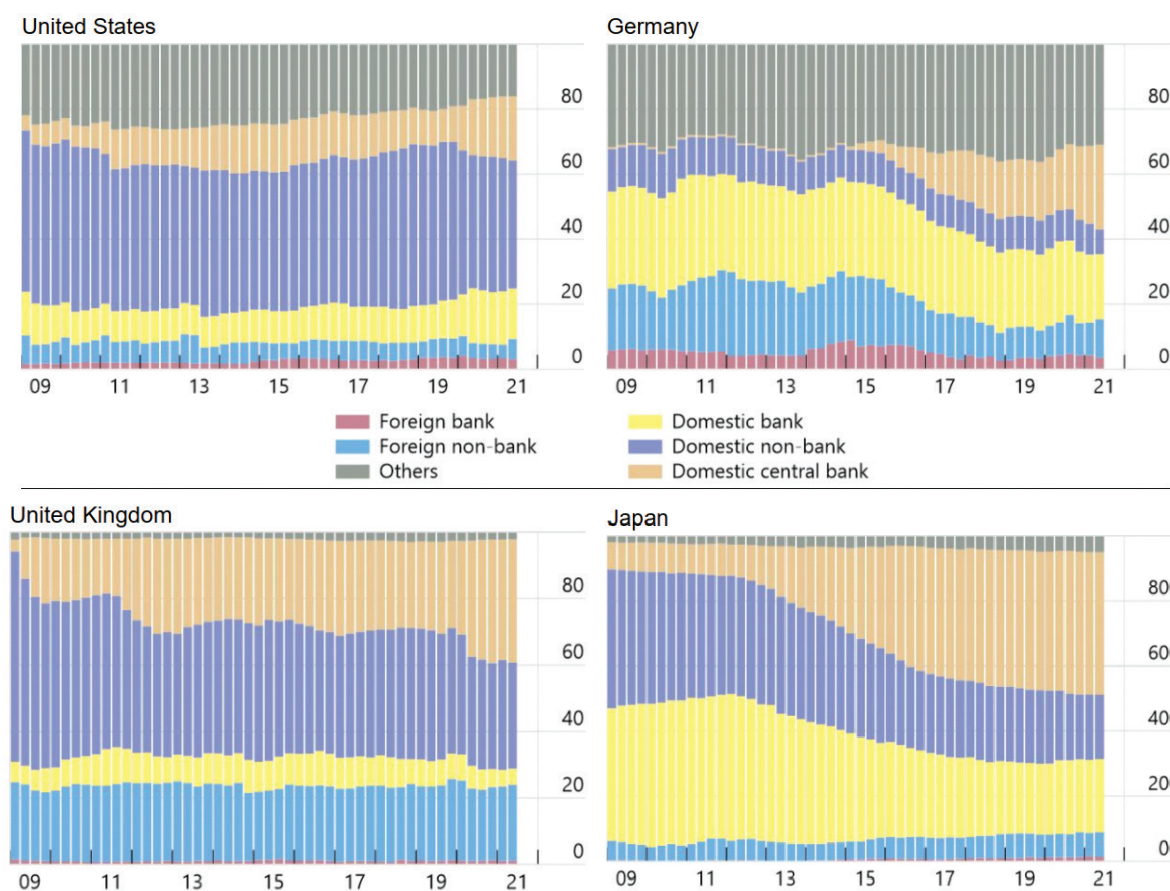
⁸ The UK and German DMO standing repo facilities.



providers, except for the US where principal trading firms (PTFs) intermediate approximately 60% of the yelectronic interdealer market. Central clearing within the interdealer market is highest in Italy and Japan; it is lower in the US as PTFs are generally not members of the CCP; and it is limited or non-existent in Germany, France, and the UK.

- Interdealer markets are predominately yelectronic, using request for quote (RFQ) or central limit order book (CLOB) protocols, although some jurisdictions (e.g. France and Germany) remain primarily or partly voice brokered. Within the interdealer market, traditional bank dealers remain the primary liquidity providers, except for the US where principal trading firms (PTFs) intermediate approximately 60% of the yelectronic interdealer market. Central clearing within the interdealer market is highest in Italy and Japan; it is lower in the US as PTFs are generally not members of the CCP; and it is limited or non-existent in Germany, France, and the UK.

The main change in ownership in recent years has been the increased holdings of government debt by domestic central banks (Graph 2). This increase in holdings is tied to large-scale asset purchase programmes to facilitate the smooth transition of monetary policy and to ease funding market strains, especially following the COVID-19 outbreak. While central banks absorbed much of the increase in supply, other investors also increased their holdings.



Graph 2: Government debt by type holder. (% of government debt)⁹

Over time, non-banks have also increased their holdings of government debt across most relevant jurisdictions (Graph 2). In the US, where non-bank data is more granular, MMFs increased their share of US Treasuries from 3.8% in 2011 to 5.4% at year-end 2019, while other open-end funds (OEFs) increased from 3.3% to 6.8% over the same period. Hedge funds' holdings of US Treasuries increased from approximately \$600 billion at year-end 2012 to \$1.2 trillion at year-end 2019¹⁰. In other jurisdictions, data to determine the drivers of growth in non-bank holdings is not available.

Data for the US show that depth at the top of the order book in the futures market collapsed during the middle of March 2020, with as few as 10% of the contracts available compared to the beginning of February.

⁹ Sources: IMF, FSB calculations

¹⁰ Federal Reserve, Yenanced Financial Accounts – Hedge Funds

Data from other jurisdictions show substantial deterioration of liquidity in futures markets as well; for instance, bid-ask spreads in the UK, French and Japanese futures markets increased sharply and open interest in the French futures contracts decreased by 70%.

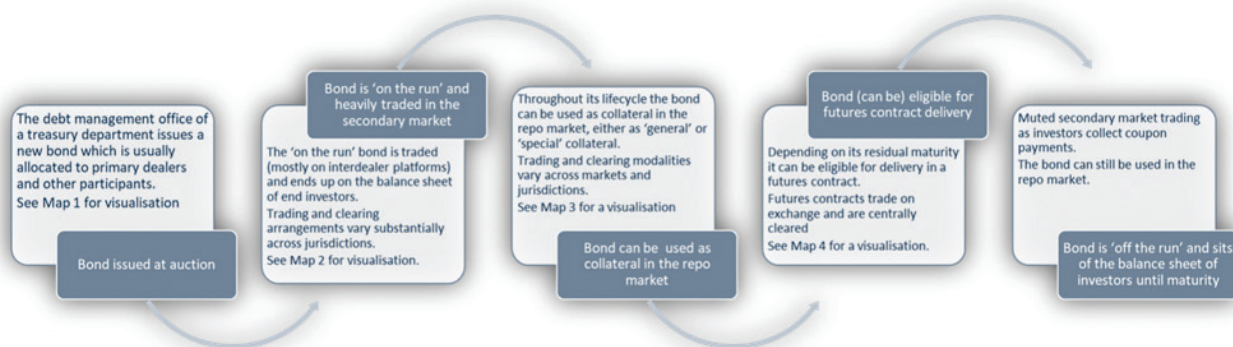
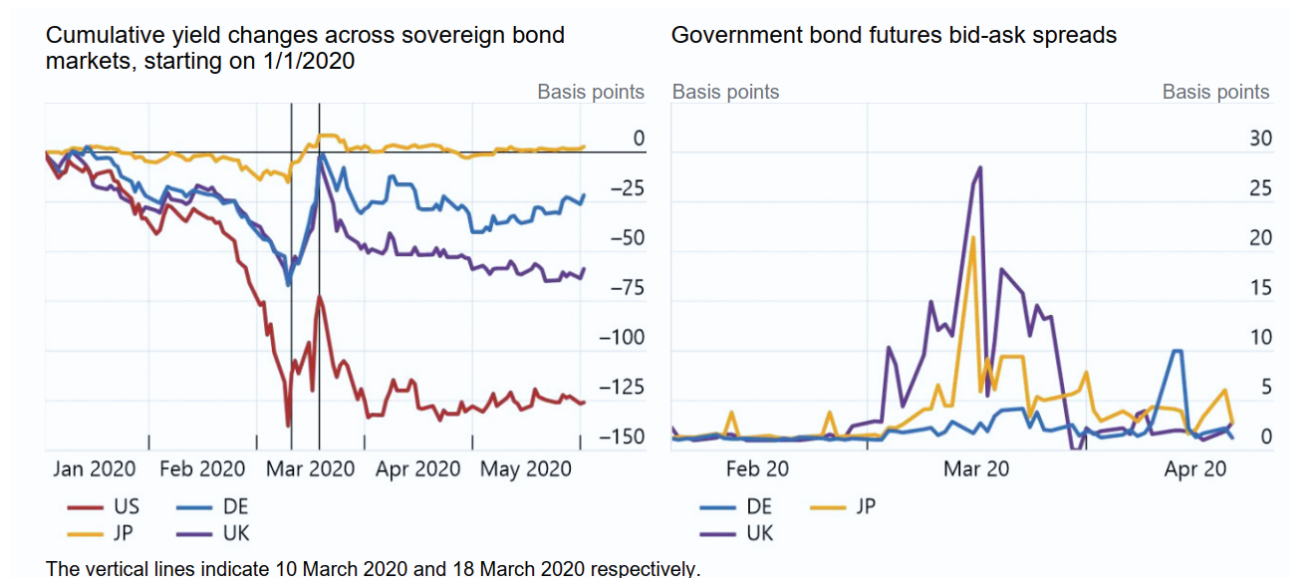


Figure 1: The stylized lifecycle of a government bond and associated markets

In March 2020 the financial system had to cope with large shifts in liquidity¹¹. The interaction of the COVID-19 shock with financial vulnerabilities – including liquidity and maturity mismatches, as well as high leverage – led to sudden and large shifts in the demand for liquidity. Notwithstanding high trading volumes, the resulting liquidity imbalances became sufficiently pervasive to create dysfunction even in core government bond markets.

Overall dynamics in March 2020 were fairly similar across government cash and futures markets in terms of rapid changes in yields and market liquidity deterioration. There was initially a ‘flight to quality’, as investors sold risky assets and bought safe assets due to the yelevated uncertainty. During this period, yields on government bonds initially declined across all jurisdictions in response to the yevolving trajectory of policy (Graph 3). However, this gave way to a ‘dash for cash’ in mid-March. Yields suddenly spiked, indicating that a broad range of investors were selling government bonds to raise cash. This was most pronounced in the off-the-run segment, in part due to the need for dealer intermediation of these trades. Liquidity measures deteriorated across cash and futures markets, and to a lesser yextent repo markets. Bid-ask spreads widened, order book depth fell, while trading volumes continued to increase.



Graph 3: Market dynamics in March 2020¹²

In the US, market participants could sell or repo their assets to dealers (which led to increasing dealers’ demand to finance incoming inventory in the repo markets); in the yeuro area and Japan they needed to acquire high quality collateral that could be pledged in yexchange for US dollars (increasing dealers’ demand for collateral); while the UK repo market behaved more similarly to the US.

¹¹ For an in-depth discussion of the March 2020 turmoil, FSB (November 2020, op. cit.).

¹² Sources: FRB; Refinitiv Tick History; FSB calculations



CONCLUSIONS AND SUGGESTIONS

Changes in core government bond markets over the past decade may have made these markets more prone to liquidity imbalances in times of stress. The growth in outstanding debt combined with the greater use of government bonds by some investors for trading and hedging strategies or liquidity management purposes may have increased sensitivity to shocks. Dealers have lower risk warehousing capacity to support intermediation compared with the size of trade flows especially in stress, while other non-bank liquidity providers do not appear to materially increase market making in stress.

The impact of the pandemic in March 2020 on government bond markets was broad-based. There is limited evidence to suggest that particular market structures significantly and uniformly contributed to better outcomes. For instance, fully cleared all-to-all electronic futures market were also subject to dislocations that were in some cases (such as in France, Japan and the UK) more severe than the cash market where clearing is less common and intermediation relies largely on dealers. Similarly, the US interdealer cash market, where PTFs have a substantial footprint, also experienced severe dislocations. Italian bonds, which are largely traded electronically and mostly centrally cleared in the interdealer market, were also negatively impacted. A corollary of this finding is that the resilience benefits of changes to the underlying market structure seem to be context-specific and jurisdiction-dependent.

In addition, the FSB will consider the scope for additional work to limit the build-up of leverage by non-bank investors. As the March 2020 experience indicates, such investors tend to respond more strongly to adverse shocks because they need to unwind their positions quickly to mitigate potential losses or raise cash, which may add to market volatility and result in a negative feedback loop.

To enhance the resilience of liquidity supply in stress, additional work could involve exploring further through analysis and data gathering:

Potential ways to increase the availability and use of central clearing for government bond cash and repo transactions. This may be particularly relevant in the repo market, given the more intense balance sheet usage. However, as noted in the report, central clearing can increase costs for market participants so they are not incentivized to use it even when it is available – so its scope, incentives and modalities vary across jurisdictions and need to be considered for the specific market in question.

The use of all-to-all trading platforms. All-to-all trading could encourage a more diverse set of participants, including new players that can potentially complement traditional dealers in their liquidity provision activities. It could also provide investors with more options to access market liquidity without solely relying on dealer intermediation. However, the resilience benefits of expanding the use of all-to-all platforms depend on whether non-banks would be a stable source of liquidity in stress, which is not a given.

References and bibliography:

1. Patel, Decomposing changes in the functioning of the sterling repo market from 2014 to 2018 (April 2021).
2. Vissing-Jorgensen, The Treasury market in spring 2020 and the response of the Federal Reserve (April 2021).
3. Harkrader and Puglia, Principal Trading Firm Activity in Treasury Cash Markets (August 2020), who show that PTFs are usually more skilled at managing their inventory risk.
4. Kruttlil et al, Hedge Fund Treasury Trading and Funding Fragility: Evidence from the COVID-19 Crisis, Federal Reserve Board of Governors Finance and Economics Discussion Series 2021-038 (June 2021).
5. Apicella et al, Insurers' investments before and after the Covid-19 outbreak (February 2022).
6. Girardi and Impenna, Price discovery in the Italian sovereign bonds market: the role of order flow, Bank of Italy Working Paper No. 906 (April 2013).
7. 'The role of central counterparties in reducing systemic risk on the repo market', Bank of Italy, Financial Stability Report, No. 1 – 2016.

Yashil

IQTISODIYOT va TARAQQIYOT

Ijtimoiy, iqtisodiy, siyosiy, ilmiy, ommabop jurnal

Ingliz tili muharriri: Feruz Hakimov

Musahhih: Xondamir Ismoilov

Sahifalovchi va dizayner: Iskandar Islomov

2023. № 6

© Materiallar ko'chirib bosilganda "Yashil iqtisodiyot va taraqqiyot" jurnali manba sifatida ko'rsatilishi shart. Jurnalda bosilgan material va reklamalardagi dalillarning aniqligiga mualliflar ma'sul. Tahririyat fikri har vaqt ham mualliflar fikriga mos kelavermasligi mumkin. Tahririyatga yuborilgan materiallar qaytarilmaydi.

Mazkur jurnalda maqolalar chop etish uchun quyidagi havolalarga maqola, reklama, hikoya va boshqa ijodiy materiallar yuborishingiz mumkin.

Materiallar va reklamalar pullik asosda chop etiladi.

El.Pochta: sq143235@gmail.com

Bot: [@iqtisodiyot_77](https://t.me/@iqtisodiyot_77)

Tel.: 93 718 40 07

Jurnalga istalgan payt quyidagi rekvizitlar orqali obuna bo'lishingiz mumkin. Obuna bo'lgach, [@iqtisodiyot_77](https://t.me/@iqtisodiyot_77) telegram sahifamizga to'lov haqidagi ma'lumotni skrinshot yoki foto shaklida jo'natishingizni so'raymiz. Shu asosda har oygi jurnal yangi sonini manzilingizga jo'natamiz.

«Yashil iqtisodiyot va taraqqiyot» jurnali 03.11.2022-yildan O'zbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi Axborot va ommaviy kommunikatsiyalar agentligi tomonidan №566955 reestr raqami tartibi bo'yicha ro'yxatdan o'tkazilgan.

Litsenziya raqami: №046523. PNFL: 30407832680027



Manzilimiz: Toshkent shahar, Mirzo Ulug'bek tumani
Kumushkon ko'chasi 26-uy.