THE JOURNEY OF INDONESIAN GOVERNMENT ACCOUNTING

Fandi Prasetya
Departemen Akuntansi, Universitas Airlangga, Surabaya
e-mail: andi.prasetya@feb.unair.ac.id

Abstract: From 1974 to today, Indonesia has undergone many periods of financial management reform. Financial management reform is necessary for a country to attain excellent governance. The crisis that happened in 1997 prompted the adoption of good Governance in Indonesia. The 1997 financial crisis revealed the inadequate management of public finances up until that point. Thus, the Indonesian government began to recognize excellent governance gradually. Government Accounting Standards are the first step towards achieving excellent Governance (SAP). In Government Regulation 71 of 2010, Accrual-based SAP is the proper SAP for implementing good governance. Government Regulation No. 71 of 2010 implements Law No. 17 of 2003 About the Financial Country. Using the accrual method is anticipated to enhance the transparency of financial reporting and the government’s public accountability. This type of qualitative descriptive research seeks to comprehend how the transition from pre-reform to the post-reform application of Government Accounting Standards happened. Through a literature search, the data for this investigation were acquired.

Keywords: Government Accounting Standards, Good Governance

INTRODUCTION

Public Sector Reforms occurred in the 1980s and were carried out by advanced industrial countries. Indonesia initiated reforms, especially in the public sector, in 1997. 1997 was a dark year for the Indonesian economy. The economic crisis in 1997 paralyzed the Indonesian economy, which is indicated by the increasing number of companies that are no longer operating/bankrupt, the number of unemployed workers, and the decline in the rupiah value (Tarmidi, 2003). The effects of the financial crisis were made worse by the Indonesian government's structural weaknesses and lack of transparency, which led to uncertainty and weakened the banking system when much foreign money came in. (Tarmidi, 2003). The many practices of KKN (Corruption, Collusion, and Nepotism) exacerbate the crisis, especially when KKN behavior takes refuge under the rules of the game, of course, making the business environment and the trust of the outside world to invest in a very alarming level (Mardiasmo, 2002).

Most individuals are unprepared for corruption, collusion, and nepotism. This circumstance motivates individuals to implement excellent governance inside government institutions. Corruption destroys societal trust, may impede national political progress, and lead to a fall in the economy (Yousaf et al., 2016). The Indonesian government has made advancements in State Finance Management as part of its attempts to foster good Governance (Suryanto, 2018). The financial industry began to improve by introducing three legislative packages State Finance Regulations No. 17 of 2003, The State Treasury Act No. 1 of 2004, Management Audit and Accountability State Finance Regulations No. 15 of 2004, and Supreme Audit Board Law No. 15 of 2006 (Kristiawati, 2016). Law No. 33 of 2004 was a revision to Law No. 25 of 1999, which addressed the financial balance between the Central and Regional Governments. Law No. 22 of 1999, which dealt with Regional Government, was
revised into Law No. 32 of 2004. State financial management reform requires modifications in several areas. The transformation in government accounting was one of the sectors that witnessed a significant change. Law Number 17 of 2003 requires modifications to government accounting. Law No. 17 of 2003, Article 36, Paragraph 1, says that the recognition and measurement of revenues and expenses based on accrual must be done within five years. Before the accrual method was implemented, the cash method was used to recognize and measure revenue and costs. The significance of designing and executing a public sector financial accounting system is prompted by structural transformations that result in accounting reforms.

With the release of the Republic of Indonesia's Government Regulation Number 24 of 2005 about Government Accounting Standards, state financial management reform, especially accounting reform, was finished. Since Law Number 17 of 2003 says that accrual-based income and expenses must be recognized and measured within five years, the Indonesian government published Government Regulation 71 of 2010 in 2010. Unfortunately, this Government Regulation cannot be applied directly by all organizations. So, this rule covers both Accruals-Based Government Accounting Rules and Cash Towards Accruals Government Accounting Standards. Accounting rules set by the government based on Cash Towards Accruals are made for organizations that are not yet prepared to utilize accrual-based accounting standards. They have five years to finish the change after Government Regulation Number 71 of 2010 goes into effect. The Republic of Indonesia Government Regulation No. 71 of 2010 must be implemented as soon as possible because a cash-based accounting system based on Government Regulation 24 of 2005 is no longer an excellent way to run a country (Halim & Kusufi, 2017). In theory, PP 71 of 2010 is a form of government accountability as an institution to the community as a principal. The choice of agency theory to be associated with PP 71 of 2010 is a form of originality of this article. Society, as the principal, has an integral part in the reform of government financial management in Indonesia.

Reform of the Government of Indonesia's Financial Management has made significant progress in establishing a sound financial management system to achieve good governance. This study investigates changes in implementing government accounting standards before and after the reform. With this research, it is hoped that it can contribute to adding to the literature on the development of accounting in Indonesia.

LITERATURE REVIEW
GOOD GOVERNANCE

According to Elahi (2009) in Yousaf et al. (2016), good governance is a well-structured process that guides political and socioeconomic connections. Participation, transparency, responsiveness, accountability, and the rule of law are indicators. Other signs of good governance include the need for checks and balances in political and bureaucratic structures, the use of power in the administration of economic and social resources as a basis for policymaking, and freedom of political membership and participation (Yousaf et al., 2016). The Asian Development Bank emphasizes four pillars of good Governance (Heryanto, 2014): Participation, Accountability, Transparency, dan Predictability. Good governance is based on the four pillars of involvement, accountability, and openness. (Heryanto, 2014). Public participation in the voting process in the election of a government is a
condition of democracy (Yousaf et al., 2016). The World Bank and IMF also believe participation is essential to good governance indicators (Uzzaman, 2010). Accountability refers to legal frameworks and reporting. Any organization that utilizes public funds and makes decisions that impact people's lives must follow specific organizational structures, strategies, processes, and activities to ensure they can be held accountable for their actions. (Rufus & O, 2019). Accountability becomes a fundamental value of the political system. Its existence is essential for the government because it provides a way for the government to understand how a program can fail and provide solutions to find a program that can work adequately (Rufus & O, 2019). The next pillar of good governance is transparency. Transparency is an action that refers to the disclosure of information from public entities about what they do (Rufus & O, 2019).

BUILDING GOOD GOVERNANCE

Good governance is a significant social project. Building it requires several stages: implementing value for Money (Heryanto, 2014), adopting the New Public Management approach, and adopting Reinventing Government (Pack & Weimer, 1994). Value for money is a concept that refers to achievement, value, and the use of significant resources in programs and public policies (King & Allan, 2018). The evaluation framework for Value for Money consists of several dimensions: economics, effectiveness, efficiency, and equity (King & Allan, 2018). When value-for-money principles are used in the public sector, it is hoped to increase public service effectiveness, improve public service quality, and reduce public service costs (Heryanto, 2014). The next stage is the New Public Management (NPM). Decentralization, delegating, and increasing local governments' authority are all necessary components of the performance management idea known as "New Public Management." (Indrawati, 2010). The market economy is the paradigm for New Public Management's political and administrative relationships (Hope, 2001).

The existence of NPM has caused a change in public sector management from a traditional, rigid, bureaucratic, and hierarchical management system to a flexible and more market-accommodating public sector management model (Mahmudi, 2003). This new approach has made a radical change in organizational culture. The development or application of methodology and methods make the functioning of government agencies more efficient and effective. (Islam, 2018). The subsequent phase entails recreating the government. The entrepreneurial mentality is transformed into the public sector by reinventing government (Lustiadi, 2016). According to Osborne and Ted Gaebler (1992) in Lustiadi (2016), the concept of reinventing government directs the government to focus more on the directing function, not on producing public services. The government gives authority to the community so that they can help themselves in the hope of reducing dependence on the government in providing services and must be able to compete with the private sector based on performance. The government must change the form of rewards and incentives towards results achieved, not inputs. The government must identify real customers to set service standards and communicate them to customers, and the government must use strategic planning, decentralized government, and be market-oriented.

PUBLIC SECTOR ACCOUNTING

An accounting information system assesses business activities, converts data into
reports, and tells decision-makers what they show. According to Sugijanto et al. (1995) in Halim and Kusufi (2017), accounting is divided into three main areas: Commercial Accounting, Government Accounting, and Social Accounting. According to Yuwono et al. (2015) in Komarawati (2010), Government Accounting or Public Sector Accounting provides quantitative financial information from government entities to process decisions from interested parties on various alternative directions and actions.

HOW IMPORTANT ACCOUNTING IS IN THE PUBLIC SECTOR

Accountability to the public, openness, and predictability of organizational performance are all achieved through accounting (Halim & Kusufi, 2017). In order to adopt NPM and achieve optimal organizational performance, there must be value for money, which includes effectiveness, economy, and efficiency. (Vries, 2010). Hence, public sector accounting with the notion of NPM and value for money is a remedy for the inadequate management of public enterprises that appear inefficient and responsible (Halim & Kusufi, 2017). Transparency and accountability are the people's wishes for a country to manage its state. The International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD), and the World Bank all advised governments in 2010 to move away from conventional cash-based accounting systems and in the direction of accrual-based accounting systems (Halim & Kusufi, 2017). Republic of Indonesia Government Regulation No. 71 of 2010 published by the Komite Standar Akuntansi Pemerintah (KSAP) in Indonesia superseded the Republic of Indonesia Government Regulation No. 24 of 2005 and mandated the issuance of a Accounting rules from the government (SAP).

Accounting rules from the government are those used to compile and present financial reports for the government. In other words, SAP may function as a legal framework to enhance the quality of government financial reporting in Indonesia (Hariadi et al., 2013). A Government Accounting System exists to increase vigilance at the government level (Bracci et al., 2015). Government Financial Accounting Standards are Based on Article 184, paragraph 3 of Law No. 32 of 2004 on Regional Government, as amended by Law No. 12 of 2008 on the Second Amendment to Law No. 32 of 2004 on Regional Government, and the law No. 17 of 2003 on State Finances, Article 32, Paragraph 2.

ACCOUNTING BASED ON CASH AND ACCRUAL

Cash-based accounting is an accounting system where transactions are recorded when money from these transactions has been received or issued (Christofzik, 2019). Meanwhile, In an accounting system known as accrual-based accounting, transactions and other events are recorded as they happen rather than waiting for money to be collected or paid (Christofzik, 2019; Jr Harrison et al., 2012). In other words, cash-based accounting revenues, expenditures, and financing in the application of cash-based accounting are recognized when cash or cash equivalents are received. In contrast, accrual-based accounting recognizes and records revenue, costs, financing, assets, liabilities, and equity as the transaction occurs. The implementation of the accounting basis is based on Standards for Government Accounting. There are two approaches to apply accrual-based Government Accounting Standards, namely: (Maimunah, 2016): (1) implement SAP thoroughly and
simultaneously in all ministries or offices, (2) The second way is to implement it in stages according to the readiness of Human Resources and supporting devices in all ministries or offices when implementing accrual-based SAP.

**METHODOLOGY**

The research method used in writing this article is a qualitative descriptive research method. The type of data used is secondary data in the form of laws and regulations, several journals with themes that support the writing of this article, as well as several other documents that can support this research—some literature. The literature was obtained through the first internet search medium, www.google.co.id. By using Google, in the writer's search column, type the keyword good governance, PP 71 of 2010, Law No. 22 of 1999, Law No. 17 of 2003, Law No. 1 of 2004, Law No. 15 of 2004, Law Number 32 of 2004 and several journals and regulations that discuss public sector accounting. In addition to using Google media, a search for sources of information is carried out using the websites https://www.sciencedirect.com/ and https://www.emerald.com/insight/. Apart from the website, data was collected from several books written by several authors discussing the topic of the research being carried out. The literature obtained is then adjusted to the research topic from the search results through books and websites. After the articles are collected, the pieces are analyzed to understand how the author's interpretation describes the development of Government Accounting Standards. So the results obtained from the literature used are valid.

**RESULT AND DISCUSSION**

The public sector must adhere to the principle of good governance. Accounting is a service activity that provides data to become the basis for decision-making. To be able to make the right decisions, accounting principles are needed (Mardiasmo, 2002). Accounting Principles are the principles and concepts used to prepare financial statements. In addition, accounting principles result from developing research results, practices that apply to society, and remarks made by competent authorities (Jusup, 2016). To make a financial report, we first know the purpose of financial reporting, which consists of (Mardiasmo, 2002): (1) Financial Report is the basis for making decisions and setting specific targets, (2) Assists decision-makers in estimating the amount, timing, and uncertainty of receiving money in the future, (3) With the existence of financial reports, it is hoped that they will be able to show the economic sources of a company transaction. The three characteristics of the information above will become a guide in preparing financial statements in an organization or business entity. Therefore, from the description above, the relationship between public sector accounting and good governance is an instrument for elaborating good governance to a more tangible level. This clarification can be achieved by managerial accounting, financial accounting, and auditing in the public sector. These three tools pay close attention to several pillars of Good governance, hoping to create an atmosphere of checks and balances (Mardiasmo, 2002).

The journey of accounting in Indonesia, according to Ritongan (2010) in Halim and Kusufi (2017), divides the application of
accounting in Indonesia into three periods, namely the pre-reform stage (1974-1999), the early reform era (2000-2005), progressive reform (2005-2010). The period 2010-present is the period of regional financial reform (Halim & Kusufi, 2017). Using the Accrual-Based Government Accounting System is a new challenge in its implementation. Guidelines are needed to explain the process of developing an accrual-based government accounting system in more detail (Suryanto, 2017).

In 2015, the accrual-based SAP system was implemented. Implementing this SAP application is not easy, and it requires supporting conditions for its implementation, which is also an obstacle faced at this time. The following is according to Ritonga (2010) in Halim and Kusufi (2017), the conditions needed to deal with problems in the implementation of accrual-based SAP (Halim & Kusufi, 2017; Suryanto, 2017): (1) The need for competent and professional Human Resources support in financial management, (2) They need support from the examiner of financial statements, (3) Available Information Technology Systems to support the implementation of accrual-based accounting, (4) In order to be comparable, an accrual-based budgeting system is needed, (5) The need for support in the form of political commitment from decision-makers in government. The following are the stages of the period of implementing government accounting from 1974-present:

**FIRST PHASE (1974-1999)**

At this stage, no legal references are used, and still, use the rules compiled in the Indonesian Treasury Act (UUPI) or Indonesische Compabilities Wet (ICW). According to Sigijanto et al. (1995) in Halim and Kusufi (2017), this ICW was promulgated in the 1925 Staatsblad Number 448 on June 10, 1927. According to the facts contained in Article 72 of the Republic of Indonesia Law Number 1 of 2004 respecting the State Treasury:

“Pada saat berlakunya Undang-undang ini, Undang-Undang Perbendaharaan Indonesia/Indische Compatabiliteitwet (ICW), Staatsbald Tahun 1925 Nomor 448 sebagaimana telah beberapa kali diubah, terakhir dengan Undang-Undang Nomor 9 Tahun 1968 namun lembaran Negara Republik Indonesia Tahun 1968 (Lembaran Negara Republik Indonesia Tahun 1968 Nomor 53, Tambahan Lembaran Negara Nomor 2860) dinyatakan tidak berlaku”.

Since 1981, local governments have used the Regional Financial Administration Manual (MAKUDA) to guide regional financial management. MAKUDA is a provincial financial administration guideline characterized by single entry and traditional budgeting. (Ganjar, 2017). This guideline still has some finances, including the application of recording still using a single entry and cash basis (Halim & Kusufi, 2017). Single entry was initially used as the basis for bookkeeping to ensure convenience and practicality. However, this single entry is weak because it cannot provide comprehensive information or reflect actual performance (Pratolo, 2001).

In 1986, the Indonesian government began to make several improvements to implementing single entry. The Accounting and Budget Control System (SAPA) was published that year. SAPA, at that time, was still using the cash basis method even though, in its implementation, it had used double entry (Setiatiti, 2016). There are several
general characteristics of the double accounting system adopted by SAPA, namely among others (Setiatiti, 2016): (1) Oriented to regional policies contained in government regulations related to regional financial issues, (2) Is a combination of financial accounting with government accounting, (3) Recording is based on the concept of double entry, (4) Reports presented are financial reports in the form of balances and surpluses, cash flow report deficits, budget realization and management reports as needed, (5) Orientation of recording to fund accounting, but in its application. It is gradually adjusted according to the local government's needs. The application of an Accounting System and Budget Control, or what is known as SAPA, has several objectives, including (Setiatiti, 2016): (1) Introducing the accrual basis recording principle, (2) Providing data and information relevant to decisions at each financial level and combining the accounting system with budget control, (3) The results of the SAPA system can be used as a regional financial control tool, (4) Regional activities are reflected in financial reports, (5) Increase the orderliness of the administrative process, (6) Improving the regular work system in work units, (7) Optimizing the management of resources and funds, (8) Shorten the time for managing financial data and can improve the accuracy and precision of management, (9) As feedback, planning, programming, budgeting, and supervision, (10) Controlling and supervising the budget and operations, (11) Make financial information presented in more detail, (12) Securing local government assets, (13) According to regional autonomy.

SECOND PHASE (2000-2005)

Law No. 22 of 1999 states that The Government System of the Unitary State of the Republic of Indonesia allows the regions to exercise Regional Autonomy. In addition, in this second stage, there are several laws as part of the reform, namely: (1) Law No. 17 of 2003 on State Finance, (2) Law No. 1 of 2004 on the State Treasury, and (3) Law No. 15 of 2004 on the Examination of State Financial Management and Responsibility.

With the existence of these three laws, it is necessary to have an amendment from the previous statutory regulations, namely: (1) Law No. 32 of 2004 to replace Law No. 22 of 1999 on Regional Government; (2) Law No. 33 of 2004 to replace Law No. 25 of 1999 on Balancing Central and Regional Government Finances. Regional autonomy is defined by Law Number 32 of 2004 as giving rights, authorities, and duties to autonomous regions to operate their governments per statutory norms. By granting this autonomy, it is hoped that it can help the central government reduce dependence on local governments (Christia & Ispriyarso, 2019). Granting autonomy to the regions is a step to provide opportunities for them to empower their potential and manage the development of their respective regions. Regional governments are given independence regarding regional finances that aim to improve community services. Local governments must consider several aspects in developing autonomy, namely (Amin, 2013): 1) The administration of regional finances and budgets is necessary for the growth of the Regional Government’s capacity and effectiveness, 2) A healthy bureaucracy, having an entrepreneurial spirit and insight must develop by the Regional Government.
The government's connection with the people, government institutions/officials, and third parties must maintain the principle of decency in government. 4) The need for community participation in development so that local governments can know the community's requirements and preferences. The change in the accounting system for the stages during the reform period was a shift from a single-entry and cash-based recording system to a double-entry and modified cash-based. (Halim & Kusufi, 2017). There are only two cash bases in accounting, namely, cash basis and accrual basis. The modified cash basis is the modified cash basis between the cash and accrual basis for the transition period (Halim & Kusufi, 2017; Suryanto, 2017). The hope to fully apply accrual-based accounting in this period is still very much hoped for because the benefits of implementing accruals are to produce better financial reports to increase transparency in regional financial management. Transparency is needed to achieve good governance. However, accruals cannot be applied in this second stage due to complexity considerations and the unprepared state/regional apparatus to implement them. (Halim & Kusufi, 2017).

THIRD PHASE (2005-2010)

This third stage of reform is a continuation of the second stage. As is well known, the State Finance Law of the Republic of Indonesia No. 17 of 2003 mandates that the Indonesian government converts from a cash-based to an accrual-based accounting system. To implement the provisions of Article 32, paragraph 2, of Law No. 17 of 2003, the government has issued The Republic of Indonesia's Government Regulation No. 24 of 2005 on Government Accounting Standards. To implement Articles 182 and 194 of Law No. 32 of 2004 about regional Governance and Articles 69 and 86 of Law No. 33 of 2004 about the financial balance between the central government and regional governments, the government enacts Government Regulation of the Republic of Indonesia No. 58 of 2005 about regional financial management.

The government accounting system underwent significant changes due to Government Regulation No. 24 of 2005 and Government Regulation No. 58 of 2005. The existence of these two government regulations was felt to be very necessary to ensure consistency in financial reporting. In this period, the cash application towards an accrual basis was used to recognize income, expenses, and financing. The purpose of cash towards accrual here is that income, spending, transfers, and financing are recorded in the Cash-based Budget Actualization Report. At the same time, assets, liabilities, and equity accounts listed in the balance sheet are recognized using an accrual accounting basis. Cash's application towards accrual has several advantages in cash control and is more informative. However, the budget and its realization cannot be compared (Halim & Kusufi, 2017).

FOURTH PHASE (2010-Present)

This stage is part of the financial reform with its implementation on an accrual basis as mandated by Article 36 paragraph (1) of Law Number 17 of 2003 concerning State Finance which reads:

“Ketentuan mengenai pengakuan dan pengukuran pendapatan dan belanja berbasis...
In addition to Law Number 17 of 2003 concerning State Finances, the application of accrual-based accounting was strengthened by Article 70, paragraph 2 of Law Number 1 of 2004, which reads;

“Ketentuan mengenai pengakuan dan pengukuran pendapatan dan belanja berbasis akrual sebagaimana dalam pasal 12 dan pasal 13 Undang-Undang ini dilaksanakan selambat-lambatnya pada tahun anggaran 2008 dan selama pengakuan dan pengukuran pendapatan dan belanja berbasis akrual belum dilaksanakan, digunakan pengakuan dan pengukuran berbasis kas”

Considering the availability of these two laws, accrual-based accounting can be implemented no later than 2008. Nevertheless, the Government Accounting Standards Committee (KSAP) has just released recommendations for the Standards for Government Accounting (SAP) mandated by Regulation by the Indonesian Government 71 of 2010 on October 22, 2010. (Halim & Kusufi, 2017). Article 70, paragraph 2 of Law No. 1 of 2004 governing the public treasury mandates the deployment of accrual-based accounting in 2008, although the new accrual-based SAP became life in 2010. Moving from cash-based accounting to accrual-based accounting, as required by Law No. 17 of 2003, resulted in the creation of Government Regulation 24 of 2005 regarding SAP. Government Regulation No. 24 of 2005 is a temporary government regulation mandated by Article 36 paragraph (1) of Law No. 17 of 2003 concerning State Finances, which states that so long as the recognition and measurement of accrual-based income and expenses have not been completed, the recognition and measurement on a cash basis shall be used. Then, this item specifies that accrual-based recognition and measurement of revenue and expenses must be completed within five years. Government Regulation 24 of 2005 is no longer applicable, as Government Regulation 71 of 2010 about Government Accounting Standards has been published at this fourth stage. Article 9, Sections 1 and 2 of Government Regulation Number 71 of 2010, states:

1) Peraturan Pemerinah Nomor 24 Tahun 2005 tentang Standar Akuntansi Pemerintah (Lembaran Negara Republik Indonesia Tahun 2005 Nomor 49, tambahan Lembaran Negara Republik Indonesia Nomor 4503) dicabut dan dinyatakan tidak berlaku; dan

2) Peraturan Perundang-Undangan yang mengatur mengenai penyelenggaraan akuntansi pemerintahan sepanjang belum diubah dan tidak bertentangan dengan peraturan pemerintah ini, dinyatakan tetap berlaku

CONCLUSION

The crisis that occurred in 1997 illustrates that the state financial management system that has been implemented so far is in quite an apprehensive condition. Starting in 1997, the government slowly made structural reforms marked by issuing several laws and government regulations that were used to create good governance. The implementation of Good governance makes reforms in the field of government accounting experience a new paradigm. With this paradigm, it is hoped that it will fulfill the public's desire to produce a transparent and accountable financial report. Even though it takes quite a long time and is carried out in several stages for the Government of Indonesia to realize good governance, the existence of
Government Regulation Number 71 of 2010 concerning Government Accounting Standards can be used as a guide in its application. Even though this SAP has been implemented, several problems are still caused by the weak socialization and education for Human Resources. Even though a system has been provided for implementing SAP, it does not guarantee its success (Maimunah, 2016).

Government Regulation Number 71 of 2010 is the foundation for executing the accrual basis of accounting prescribed by State Finances Law Number 17 of 2003. Following this law, the accounting foundation of the Indonesian government must be on an accrual basis. Implementing the accrual basis is anticipated to boost the transparency of financial reports from the government as a form of public accountability. This objective conforms to the description of Jensen and Meckling's agency theory (1976). In Maimunah (2016), Jensen and Meckling (1976) describe an agency relationship as a contractual arrangement in which one or more principals engage an agent to provide a service for their benefit by delegating specific decision-making authority to the agent. This agency theory is applicable in the State Unification of the Republic of Indonesia, where the government implements a democratic system.

REFERENCE


and International Relations, 9(April 2015), 141–151.
https://doi.org/10.5897/AJPSIR2015.0775


https://doi.org/10.20885/sinergi.vol6.is1.art5

https://doi.org/10.1016/j.sbspro.2016.05.023


