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R2018-0117/1

May 31, 2018

Closing Date: Tuesday, June 19, 2018 at 6 p.m.

FROM: Vice President and Corporate Secretary

China - Anhui Aged Care System Demonstration Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed loan to China for an Anhui Aged Care System Demonstration Project (R2018-0117), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC and MIGA

Document of
The World Bank

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Report No: PAD1655

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$118 MILLION

TO THE

PEOPLE'S REPUBLIC OF CHINA

FOR AN

ANHUI AGED CARE SYSTEM DEMONSTRATION PROJECT

May 29, 2018

Social Protection and Jobs Global Practice
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 2, 2017)

Currency Unit	=	Chinese Yuan (CNY)
CNY6.896	=	US$1
US$0.145	=	CNY1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ACFI	Aged Care Funding Instrument
ADL	Activities of Daily living
AO	Audit Office
BCR	Benefit-cost Ratio
CHARLS	China Health and Retirement Longitudinal Study
CHS	Combined Health Status
CPS	Country Partnership Strategy
DA	Designated Account
DDR	Due diligence review
DOF	Department of Finance
DOCA	Department of Civil Affairs
DRC	Development and Reform Commission
EA	Environmental Assessment
ECOP	Environmental Code of Practices
ESMP	Environmental and Social Management Plan
ESMF	Environmental and Social Management Framework
FM	Financial Management
FMM	Financial Management Manual
GP	Global Practice
HQ	Headquarters
IADL	Instrumental Activities of Daily Living
ICB	International Competitive Bidding
IE	Impact Evaluation
IFR	Interim Financial Report
InterRAI	International Resident Assessment Instrument
IVA	Independent Verification Agency
IRR	Internal Rate of Return
LFP	Labor Force Participation
LG	Leading Group
M&E	Monitoring and Evaluation
MIS	Management Information System
MOF	Ministry of Finance
MTR	Midterm Review

NCB	National Competitive Bidding
OECD	Organization for Economic Co-operation and Development
OM	Operations Manual
PDO	Project Development Objective
PEP	Project Expert Panel
PIU	Project Implementation Unit
PMO	Project Management Office
PPMO	Provincial Project Management Office
PWLF	Public Welfare Lottery Fund
QBS	Quality-Based Selection
QCBS	Quality- and Cost-Based Selection
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SA	Social Assessment
SOE	State-Owned Enterprise
STEP	Systematic Tracking of Executing Procurement
TA	Technical Assistance
TCM	Traditional Chinese Medicine

Regional Vice President:	Victoria Kwakwa
Country Director:	Bert Hofman
Senior Global Practice Director:	Michal Rutkowski
Practice Manager:	Philip O'Keefe
Task Team Leaders:	Elena Glinskaya, Dewen Wang

CHINA
Anhui Aged Care System Demonstration Project

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PAD DATA SHEET

China

Anhui Aged Care System Demonstration Project (P154716)

PROJECT APPRAISAL DOCUMENT

GSP02

Report No.: PAD1655

Basic Information		
Project ID P154716	EA Category B - Partial Assessment	Team Leader(s) Elena E. Glinskaya, Dewen Wang
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]	
Project Implementation Start Date 19-Jun-2018	Project Implementation End Date 30-Jun-2023	
Expected Effectiveness Date 31-Oct-2018	Expected Closing Date 31-Dec-2023	
Joint IFC No		

Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Phillip O'Keefe	Michal J. Rutkowski	Bert Hofman	Victoria Kwakwa

Borrower: People's Republic of China					
Responsible Agency: Anhui Provincial Department of Civil Affairs					
Contact:	Qianyi Hu		Title:	Director	
Telephone No.:	86-551-65606011		Email:	2210117276@qq.com	

Project Financing Data (in US$, Millions)					
[X] Loan	[ ] IDA Grant	[ ] Guarantee			
[ ] Credit	[ ] Grant	[ ] Other			
Total Project Cost:	197.84		Total Bank Financing:	118.00	

Financing Gap:	0.00

Financing Source	**Amount**
Borrower	79.84
International Bank for Reconstruction and Development	118.00
Total	197.84

Expected Disbursements (in US$, Millions)

Fiscal Year	2019	2020	2021	2022	2023	2024				
Annual	12	15	25	30	28	8				
Cumulative	12	27	52	82	110	118				

Institutional Data

Practice Area (Lead)

Social Protection and Jobs

Contributing Practice Areas

Health, Nutrition and Population

Proposed Development Objective(s)

The project development objective (PDO) is to support the government of Anhui in developing and managing a diversified, three-tiered aged care service delivery system for the elderly, particularly those with limited functional ability.

Components

Component Name	**Cost (US$, Millions)**
Supporting the Development of Government Stewardship Capacity	10.45
Strengthening Community-based and Home-based Care Services	42.64
Strengthening the Delivery and Management of Nursing Care	136.90
Project Management, Monitoring, and Evaluation	2.68

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	**Rating**
1. Political and Governance	Low
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial

5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ] No [**X**]
Does the project require any waivers of Bank policies?	Yes [ ] No [**X**]
Have these been approved by Bank management?	Yes [ ] No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ] No [**X**]
Does the project meet the Regional criteria for readiness for implementation?	Yes [**X**] No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04		**X**
Forests OP/BP 4.36		**X**
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11		**X**
Indigenous Peoples OP/BP 4.10		**X**
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Project Expert Panel (PEP), Section I.A.1 (e) of the Schedule to the Project Agreement	**X**		CONTINUOUS

Description of Covenant

Anhui maintains a PEP at the provincial level to provide technical assistance to the PMOs and PIUs on project implementation and review.

Name	Recurrent	Due Date	Frequency
Project Operations Manual and the Guidelines for the Purchase of Basic Aged-Care Services, Section I.A.2. of the Schedule to the Project Agreement	**X**		CONTINUOUS

Description of Covenant

Throughout the implementation of the Project, the Project Implementing Entity shall carry out the Project, in accordance with the Project Operations Manual (OM) and the Guidelines for the Purchase of Basic Aged-Care Services, as applicable, in a manner acceptable to the World Bank.

Name	Recurrent	Due Date	Frequency
Annual Work Plans, Section I.A.3 of the Schedule to the Project Agreement	**X**		Yearly

Description of Covenant

The Project Implementing Entity prepares, submits a draft Annual Work Plan and budget for the following calendar year and the related proposed budget including the amount of counterpart funds by November 30 in each year beginning in calendar year 2018 for World Bank review, and ensures Project implementation in accordance with the Annual Work Plans agreed with the World Bank and in a manner acceptable to the World Bank.

Name	Recurrent	Due Date	Frequency
Service Agreement, Section I.C.1. of the Schedule to the Project Agreement	**X**		CONTINUOUS

Description of Covenant

Anqing and Lu'An respectively shall enter into service agreements with eligible providers of aged-care services, pursuant to the criteria and the model terms and conditions set forth to this effect in the Guidelines for the Purchase of Basic Aged-Care Services.

Name	Recurrent	Due Date	Frequency
Mid-term review, Section II.2 of the Schedule to the Project Agreement		June 30, 2021	

Description of Covenant

Anhui shall prepare and furnish to the World Bank no later than June 30, 2021 a consolidated mid-term review report for the Project, summarizing the results of the monitoring and evaluation activities carried out from the inception of the Project, and setting out the measures recommended to ensure the efficient completion of the Project and to further the objectives thereof.

Name	Recurrent	Due Date	Frequency
Capacity Building for Suzhou, Section IV. A.1. of the Schedule to the Project Agreement		By no later than eighteen months from the Effective Date	

Description of Covenant

Suzhou, shall enter into a service agreement on the basis of terms of reference and a calendar of activities acceptable to the World Bank, with a consultant having qualifications and experience acceptable to the

World Bank, for the purpose of assisting the Project Implementation Entity in the implementation of Part C. 3 (b) of the Project.

Conditions		
Source of Fund	**Name**	**Type**
IBRD	Guidelines for the Purchase of Basic Aged-Care Services, Section IV.B. (b) (i) of Schedule 2 to the Loan Agreement	Disbursement

Description of Condition

The Project Implementing Entity, having taken into the account the views of the World Bank, has finalized and adopted the Guidelines for the Purchase of Basic Aged-Care Services.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Elena E. Glinskaya	Team Leader (ADM Responsible)	Program Leader	TTL and Technical Specialist	EACCF
Dewen Wang	Team Leader	Senior Social Protection Economist	Co-TTL and Technical Specialist	GSP02
Zheng Liu	Procurement Specialist (ADM Responsible)	Procurement Specialist	Procurement	GGO08
Fang Zhang	Financial Management Specialist	Senior Financial Management Specialist	Financial Management	GGO20
Alejandro Alcala Gerez	Counsel	Senior Counsel	Legal	LEGES
Aleksandra Posarac	Peer Reviewer	Lead Economist	Technical Advisor	GSP03
Anita M. Schwarz	Peer Reviewer	Lead Economist	Technical Advisor	GSP01
Asta Zviniene	Peer Reviewer	Senior Social Protection Specialist	Technical Advisor	GSP04
Dhawal Jhamb	Team Member	Investment Officer	PPP Specialist	CASPE
Emily Sinnott	Peer Reviewer	Program Leader	Technical Advisor	LCC7C
Aparnaa Somanathan	Peer Reviewer	Program Leader	Health Economist	EACNF

Veronica Silva Villalobos	Peer Reviewer	Senior Social Protection Specialist	Technical Advisor	GSP04
Feng Ji	Environmental Safeguards Specialist	Senior Environmental Specialist	Environment	GEN2A
John T. Giles	Team Member	Lead Economist	Research Advisor	DECHD
Lansong Zhang	Team Member	Operations Officer	Operations	GSP02
Meixiang Zhou	Social Safeguards Specialist	Senior Social Development Specialist	Social Development	GSU02
Mukesh Chawla	Peer Reviewer	Adviser	Health Advisor	GHN03
Shuo Zhang	Team Member	Senior Health Specialist	Health Specialist	GHN02
Somil Nagpal	Peer Reviewer	Senior Health Specialist	Health Specialist	GHN02
Tao Su	Team Member	Program Assistant	Operation and Program Management	EACCF
Tianxiu Kang	Team Member	Program Assistant	Operation and Program Management	EACCF
Yang Huang	Team Member	Economist	Economist	GSP02
Zhefu Liu	Social Safeguards Specialist	Senior Social Development Specialist	Social Development	GSU02
Zhuo Yu	Team Member	Finance Officer	Loan and Disbursement	WFALN

Extended Team

Name	**Title**	**Office Phone**	**Location**
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Zhanlian Feng	Senior Research Analyst Aging, Disability, and Long Term Care RTI International	+1 781 434 1737	307 Waverley Oaks Road, Suite 101 Waltham, MA, USA 02452-8413

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
China	Anhui	1. Anqing Municipality 2. Lu'An Municipality 3. Suzhou Municipality 4. Xuancheng Municipality (Ningguo County-level City, Xuanzhou District)			

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required?	Consultants will be required

I. STRATEGIC CONTEXT

A. Global and Country Context

1. Rapid declines in fertility, coupled with significant increases in life expectancy, have resulted in older people making up an increasing proportion of the populations in many high- and middle-income countries, including Organization for Economic Co-operation and Development (OECD) countries and countries in East Asia. Across OECD countries, on average, the share of the population over 65 years of age is expected to reach 28 percent in 2050. For Vietnam, Thailand, Korea, and East Asia, these figures are 21.5, 29, 35, and 36 percent, respectively (see World Population Prospects 2017 and World Bank 2016a). In OECD countries, public expenditures on long-term care for the elderly have the highest growth across the various functions of health and social spending, and account for 1.7 percent of GDP on average (ranging from 3.7 percent in Netherlands to 0.5 percent in Poland and Israel), see OECD (2017). This variation not only reflects the population structure, but also the development, composition, and efficiency of the formal delivery systems, and countries continue searching for more efficient delivery and financing models.[1]

2. Population ageing is also occurring rapidly in China which will move from being an 'ageing' to an 'aged' society (from having 7 percent of the population 65 years of age and over to 14 percent) in just 25 years, by 2027. By comparison, this transition took 115 years for France, 45 years for England, and 69 years for the United States. The aging process is projected to accelerate in the next few decades, with the growth of the elderly population being especially pronounced between 2015 and 2040. China is expected to have about 26 percent of the population aged 65 years or above and about 8 percent of the population aged 80 years of age and over by 2050. In fact, the over 80 years old population has been increasing faster than the proportion of the total elderly population in China. This trend has important implications for developing aged care services because those over 80 are much more likely than those ages 60–80 to require help with self-care and social activities.

3. The Confucian norm of filial piety—which is a central value in traditional Chinese culture—enshrines a virtue of respect for one's parents and, traditionally, elderly care in China has been confined to the familial sphere. Under this cultural mandate, adult children are required to care for elderly parents physically, financially, and emotionally. The preeminence of filial duty is demonstrated by the following Chinese saying, "of all virtues, filial piety is the first." Accordingly, co-resident in-kind care provided to parents and parents-in-law was the norm and formal institutional elderly care was rare and limited to a small number of publicly supported welfare recipients. In urban areas, they are referred to as 'three no's' (*Sanwu*)—people who have no legal guardians to support them, have lost the ability to work, and have no source of income. In rural

[1]See United Nations, Department of Economic and Social Affairs, Population Division (2017). *World Population Prospects: The 2017 Revision, Key Findings and Advance Tables*. Working Paper No. ESA/P/WP/248 ; World Bank (2016*) Live Long and Prosper: Aging in East Asia and Pacific*, available from https://openknowledge.worldbank.org/bitstream/handle/10986/23133/9781464804694.pdf; and OECD (2017) *Health at Glance 2017: OECD Indicators*.

areas, people who qualify as 'three no's-five guarantees' (*Wubao*) are the elderly to whom the local government guarantees food, clothing, housing, medical care, and burial expenses.

4. Over the past several decades, rapid demographic and socioeconomic changes brought concerns that families alone might not be able to continue shouldering the burdens of elderly care. These concerns have been compounded by China's one-child family policy, which was in effect for more than 30 years (and ended in late 2015) and has further strained the capacities of family caregivers. More recently, the duty of caring for one's parents became codified in Chinese law; in fact, a law called 'Protection of the Rights and Interests of Elderly People' was passed, in December 2013, by the standing committee of the National People's Congress. The nine clauses of the law lay out the duties of children and their obligations with respect to needs of the elderly.

5. Anhui—an agricultural province located in the central region of China along the middle part of Yangtze River—faces particular difficulties in meeting the elderly care needs of its population. Its population is aging faster than that of many other provinces in China. Today, about 10 percent of the population of the province is 65 years of age and over, which is above the national average. This is partly explained by Anhui being a migrant-sending province—nearly 15 million of Anhui's population of 61 million work in other parts of the country. A common socioeconomic trend in China is that migrant workers, who tend to be relatively young, often leave behind their ageing parents when migrating to take up economic opportunities in other cities. The Anhui Department of Civil Affairs (DOCA) estimates that, of the 6.9 million people over age 65 living in Anhui, about 1.3 million have some limitations in functional ability, for which they require help with activities of daily living (ADL).

Table 1. Main Providers of Informal Care (for those who need care)

	National				Anhui			
	Urban		Rural		Urban		Rural	
	Men	Women	Men	Women	Men	Women	Men	Women
Cared for by spouse	60	35.4	55.1	42.7	66.5	55.7	53	49.2
Cared for by people other than spouse:	32	60.2	40.6	52.7	34.5	40.8	32.5	49.7
Cared for by children and/or children's spouse	25.8	53.1	30.9	42.8	29.4	31.7	24.6	36
Cared for by sons and/or sons-in-law	22.3	38.8	26.1	34	23.7	24.1	15.1	30.2
Cared for by daughters and/or daughters-in-law	23.1	47.6	26.4	36.8	26.3	31.7	23.2	31
Cared for by grandchildren	0.9	1.9	1.7	4.1	0	3.7	1.1	2.7
Cared for by others (including formal)	10.9	7.8	10.1	7.6	9	5.3	6.8	13.3
No caregiver	17.6	15.3	18.8	18.3	15.7	21.6	24.5	15.4

*Note: C*ategories (for example, cared by spouse and cared by other family member) are not mutually exclusive, therefore they sum up to more than 100.
Source: World Bank staff calculations based on the 2015 China Health and Retirement Longitudinal Study (CHARLS) survey.

6. Most elderly care services in Anhui are supplied informally, just as in the rest of China, and are provided by family members, relatives (the familial caregivers), or by other unpaid caregivers at home. The spouse and children are the most common familial care providers (see table 1). With regard to the gender of care recipients, men primarily receive care from spouses, while women—who tend to outlive their spouses—are far more likely to receive care from adult

children or other providers. This pattern holds in urban and rural areas; nationwide and in Anhui. Among adult children who provide care, the burden of elderly care falls disproportionately on women, as well. The gender difference, in Anhui as well as nationally, is starker in urban areas where economic opportunities abound. The average time for providing elder care is around 18 hours per week and older caregivers tend to spend more time on caregiving duties. High time demands of elderly care is one of the reasons for early withdrawal of adult women from the labor market. While the use of formal care (both institutional and home-based) does not carry a stigma in the society today, the effective demand for formal care is very sensitive to quality and price considerations, and is constrained by the low availability of services with the desired combination of these two. Urban women and rural men are at the highest risk of not receiving any care in Anhui and China overall.

B. Sectoral and Institutional Context

7. The national government is aware of the need to develop an efficient and sustainable approach to aged care. A policy framework has been developed through a number of directives, laws, and regulations. At the central government level, the state council issued several milestone documents, including the 12th Five-Year Plan for the Development of Aged Care Services (2011), the Opinions on Accelerating the Development of Services for the Aged (2013) and, most recently in 2017, the 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System, which identified new monitorable targets.

8. The vision promoted in these documents is to build a well-functioning market for elderly care services where individuals can find services that satisfy their needs, preferences, and resource constraints. The envisaged system will have three tiers: home-based care will be its bedrock, and it will be supported by community-based care and supplemented by institutional care. The documents make clear that private provision and private (self) payment will play the main role in the elderly care system going forward, while the Government will continue to allocate funding to cover services for selected low-income and vulnerable groups. The Government also strongly signaled that it will devote an increasing amount of public resources—over 50 percent of the 'Welfare Lottery Fund'—to support elderly care services and will continue developing policies to stimulate the market for private provision of all three tiers. It also signaled its readiness for stewardship of the elderly care market and its commitment to start piloting the long-term care insurance (both social and private insurance); encouraged integration between medical and social services; and called for strengthening workforce training—at places where aged care services are delivered, in facilities of higher learning, and in business schools. The specific monitorable targets set for the 13th Five-Year Plan period include the development of private provision, increasing the nursing content of care, expanding geriatric services in hospitals, securing allocations from the 'Welfare Lottery Fund', and expanding social grassroots participation of the elderly.

9. Against this backdrop, a new sector of formal elderly care services has emerged in China to meet the needs of the frail and disabled elderly who can no longer be cared for adequately by family caregivers. This sector is evolving across the country, catalyzed by government policies and private sector initiatives. Currently, formal services—both publicly and privately provided—are available to the general population and require private payment. Private facilities charge higher prices as compared with public facilities and those public facilities that are better equipped and

offer an attractive array of services maintain a waiting list for interested clients. Free services are available to *Sanwu* and *Wubao* senior citizens and are typically provided in public residential facilities that receive funding from the government budget (from various levels of Government). Box 1 presents the landscape of elderly care services that currently exist in China.

Box 1. Current Landscape of Aged Care Services in China

Institutional care in China. Broadly, there are three main types of institutional care facilities in China today, differentiated by the target clientele, source of revenues, and levels of care provided. These include: (a) public social welfare facilities; (b) skilled nursing homes; and (c) retirement communities. Public social welfare facilities (welfare homes and public nursing homes) have been around for decades and used to exclusively serve welfare recipients such as childless elders, orphans, and developmentally disabled adults without families. Many such facilities, mostly in urban areas, have recently expanded to also take in non-welfare individuals who pay for their care privately; these currently constitute the majority of residents. The services and amenities available in public social welfare facilities depend, to large extent, on which level of government owns and runs the facility. Municipal government-run facilities, many of which have a long waiting list for interested clients, typically are better equipped, and offer a more attractive array of services than facilities run by lower-level (for example, district, county, or township) governments. Skilled nursing homes (public and private) are facilities that have professional staff (nurses, therapists, physicians, and so on) available to provide skilled nursing, rehabilitation, or medical services. Private retirement communities include senior apartments or assisted living facilities that provide various levels of personal care assistance, but fewer professional services.

Community-based and home-based care. Broadly there are two types of community centers. The first type is the physical community center, which provides cooked meals, organization of social activities, basic diagnostic health checks, rehabilitation through basic exercise and rehabilitation equipment, assistance with personal tasks, companionship, and services referrals. These services are provided during the day and some centers may also set up beds for seniors to stay overnight. Services are provided free-of-charge to eligible seniors, while other seniors are offered services at below market prices. There are currently different systems in place for payment depending on the local circumstances. The second type of community center is the virtual center, where services are offered through an information network that links community services to seniors. Home-based care typically includes social services, such as assistance with daily living (bathing, feeding, household chores, and so on) and medical care services (nursing, rehabilitation, and so on). Nongovernment providers operate the majority of community centers and provide home-based care.

Source: World Bank 2018.

10. A similar landscape has developed in Anhui. With regard to institutional care, overall by the end of 2016, there were about 2,585 aged care facilities in Anhui with a total of 330,763 beds (of which 583 were private aged care facilities with 77,315 beds). The overwhelming majority of public facilities are in rural areas; in fact, public rural facilities host about 72,894 elderly people, while urban public facilities host about 17,219 elderly people. The rural public facilities mostly provide shelter, but little care. In recent years, both urban and rural public facilities have started accepting self-paying patients, charging them prices that are typically below those of similar-purpose private facilities. The capital and operating expenditures of public facilities are covered by local government funding and private facilities receive about CNY 5,000 per bed as a one-time construction subsidy and approximately CNY 200 per month per person as operating subsidy.

11. Formal home-based care and community care are still largely underdeveloped, but are receiving increasing attention. While official data show that there are 1,030 urban community aged day care centers (covering 70 percent of all urban municipalities and 30 percent of rural counties) in Anhui, many of these are in a substandard condition and offer few services. Home-based care started developing recently, including through government contracting with nongovernmental

organizations. The coverage is still low, eligibility is restricted to the low income and poor beneficiaries over a certain age (determined locally—over 80 or over 85), and the set of services provided at home and covered by public funding (approximately CNY 100 per month) is limited.

12. The primary regulatory mechanism that the Government deploys to engage private providers is registration and entry licensing—to ensure that providers have at least a certain minimum capacity needed to deliver services. However, the current governance arrangements mean that the process is fragmented. For-profit service providers are required to register with the Industrial and Commercial Administration Department, and not-for-profits must register with DOCA. To obtain an operating license for social care delivery, a provider applies to DOCA and to deliver skilled nursing or long-term care or medical services, the provider applies to the Department of Health. Providers are subjected to qualification reviews to obtain the relevant licenses. Some checks of the services provided are commissioned by public agencies, but the Government lacks a robust system to hold these external providers accountable for the services they deliver. To provide elderly care services, registered providers then need to obtain operating licenses. There is no unified information system that keeps data on both public and private providers. Only a few localities place the subsidy funds in the hands of consumers (for example, provide vouchers or coupons); mostly the payments are made by the contracting government agency to the provider.

13. Going forward, Anhui Province aims to improve its provision of elderly care services. Consistent with the national-level documents, the strategy for elderly care development in Anhui is articulated in the 2014 Action Plan on Accelerating Aged Care Sector and the 2017 13th Five-Year Plan on Aging and Aged Care System Development (hereafter the Action Plans). The near-term objective set out for Anhui is that, by the end of 2020, Anhui will have achieved "… a fully functional aged care system with reasonable layout and appropriate dimension to cover both rural and urban areas that meets the basic needs of the elderly for shelter, medical care, and elderly care services". Consistent with their current direct delivery governance regime, the provincial authorities have set input targets—aiming to increase the number of (institutional) care facility beds to 45 beds per 1,000 for people 65 years of age and over, reach universal coverage of community aged care stations in the cities, and reach near universal coverage of community service facilities with aged care provision in towns and rural areas (the targets are 90 percent for towns and 80 percent for rural areas). The Anhui Action Plans further direct the relevant authorities and departments to:

(a) Exercise stewardship over the public and private segments of service provision;

(b) Use contracting and contract management as the main policy tool for interacting with private providers, including direct purchasing of services and outsourcing the management and operation of publicly owned aged care facilities to the private and nongovernment sectors (a so-called mixed model), thereby reaching the target of 70 percent of elderly care beds being operated by nongovernment operators;

(c) Allocate 50 percent of the provincial 'Welfare Lottery Fund' to the development of elderly care services;

(d) Make construction and operating subsidies available to both public and private aged care facilities and make service subsidies available to both residential and home-based care services;

(e) Link the subsidy amount to the level of deterioration in functional ability of the persons served;

(f) Establish a complete set of market entry, exit, and other regulatory policies and empower the Government to develop service standards;

(g) Promote integration of medical and social services, through service coordination of aged care, health care, rehabilitation, and hospice care, with the targets of (i) 80 percent of all elderly being under health case management; and (ii) 30 percent of total beds in elderly care institutions providing nursing care;

(h) Strengthen the rural system by transforming rural welfare homes into regional service centers and reaching the 80 percent target occupancy rate in rural welfare homes;

(i) Expand human resource development for the elderly care sector by collaborating with universities, technical and vocational education and training institutions, schools, and other institutions of learning to provide training to frontline caregivers, managers, operators, and relevant government officials; and

(j) Develop an information system and monitoring and evaluation (M&E) system for aged care services that would be evidence based and include an assessment of needs and eligibility criteria for receiving public subsidies.

14. These policies and actions conform to good international practices for developing elderly care services (World Bank 2018).

C. Higher Level Objectives to which the Project Contributes

15. The above country and sector context outlines the main challenges facing China and Anhui's aged care system. Within the limited project period and financing, the project attempts to address some of these challenges. In particular, the project will concentrate most of its resources on expanding service provision in project municipalizes, but will also devote resources to strengthening the government's stewardship capacity over the public and private segments of service provision. This includes building an information system that would serve the Government, the private providers, and the consumers; improving the government institutions responsible for the assessment of elderly people's functional ability; and strengthening quality standards and human resource training to improve efficiency and quality of provision and consumer satisfaction.

16. Accordingly, the project will not only expand aged care provision in the short term but also contribute to the development of more comprehensive, efficient, and effective care provision in the province.

17. This project promotes 'inclusive development'—one of the pillars of the World Bank Group's Country Partnership Strategy (CPS) for China (Report No. 67566-CN) (FY2013-FY2016) discussed by the Board of Executive Directors on November 6, 2012. To support China's continued development, the CPS notes the need for enhancing access to social services. Both the China 2030 report completed in 2014 and the recent Systematic Country Diagnostic (Report No. 113092-CN**)** demonstrated that the social compact between the state and the citizens includes services for the elderly. Citizens expect that these services will be available in the market and that the state will help them to afford these services.

18. The project supports the World Bank's twin goals. Underdeveloped markets for elderly care and continued inequality in access to, and quality of, elderly care is one of the major issues for both the poor and the middle class. While the state provides last resort care for the poor, "services for the poor are poor services", and there is a pressing need to improve the quality of provision and increase the availability of elderly care services that would respond to the preferences and resource constraints of the various strata of the population.

19. The CPS notes that the World Bank Group's most valuable contribution in China is the role it plays in innovation and knowledge sharing. This project will provide opportunities to pilot innovations identified in the recommendations of the analytical products, including advancing new modalities of service delivery (emphasizing a continuum of care and testing outreach functions of institutional facilities), and building stewardship and oversight over the public and private segments of service provision (emphasizing quality standards, the assessment of elderly people's functional ability, and the information system). Piloting these innovative approaches may allow China to leapfrog the experience of many advanced economies in developing elderly care systems.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

20. The PDO of this project is to support the government of Anhui in developing and managing a diversified, three-tiered aged care service delivery system for the elderly, particularly those with limited functional ability.

21. As this PDO is formulated using a number of terms and definitions developed in the specialized literature, some of which are also specific for China's context, these are duly denoted below.

(a) **Managing an elderly care system** refers to the government's stewardship role in the system[2] and delineates the set of functions carried out by a government as it seeks to achieve national policy objectives related to elderly care province-wide. Developing it, in this context, refers to activities and results in selected four municipalities.

(b) **Diversified aged care service delivery system** refers to the ownership status of service delivery operating units, which comprises public entities (including those that belong to the national and all levels of subnational government); private entities (including not-for-profit, for-profit and so-called social capital-owned or state-owned

[2] Merriam-Webster dictionary defines stewardship as "the conducting, supervising, or managing of something; especially the careful and responsible management of something entrusted to one's care". See https://www.merriam-webster.com/dictionary/stewardship . The World Health Organization (WHO) further defines stewardship in context of health systems, which is illustrative and is as follows. "Stewardship, sometimes more narrowly defined as governance, refers to the wide range of functions carried out by governments as they seek to achieve national health policy objectives. In addition to improving overall levels of population health, objectives are likely to be framed in terms of equity, coverage, access, quality, and patients' rights. National policy may also define the relative roles and responsibilities of the public, private and voluntary sectors - as well as civil society - in the provision and financing of health care." See http://www.who.int/healthsystems/stewardship/en/

enterprises), and mixed entities (referring to any private entities that utilize government-owned assets to deliver services).

(c) **Three-tiered system** refers to the availability of the key types of services — home-based care, community-based care, and institutional care. It captures the notion of a continuum of services to be put in place to serve the diverse needs of the elderly. A system comprising a continuum of services with all three major tiers appropriately developed is referred to as a balanced aged care system.

(d) **Limited functional ability** of an individual refers to an interaction between the deterioration in the intrinsic capacity of this individual to perform activities of daily living (ADL) and instrumental activities of daily living (IADL) and the environmental factors surrounding this individual. ADLs and IADLs describe an individual's ability to perform tasks, and include, but are not limited to, his/her abilities to get out of bed, take baths or showers, use the toilet, dress, prepare meals, eat, take medications, and manage money. Key dimension for defining limited function ability is dependence. Dependence indicates whether an individual needs the assistance of another person or special equipment to accomplish the task.

B. Project Beneficiaries

22. The main direct beneficiary group of this project is the elderly with limited functional ability. In addition, *Sanwu, Wubao, Dibao,* low-income empty nesters, and the oldest elderly—the indigent (low income and poor) elderly—are also in the direct target beneficiary group. [3]

23. The functional ability limitations and care needs of these groups are assessed by responsible government-appointed officers—nurses, doctors, and social workers. As the project activities get implemented and the assessment of functional ability limitations and care needs get strengthened both in technical and institutional terms, the responsibilities for and the content of these assessments are expected to change.

24. Familial caregivers for the elderly (who are more likely to be women) are the indirect or secondary beneficiaries of the project. Multidisciplinary literature conclusively established that their welfare, on average, is reduced due to having to perform caregiving tasks, especially when no formal alternatives are available. Therefore, the availability of alternative care that could substitute for the care they provide gives them choices and if they choose to avail formal care, the freed time can be used for labor market work and recuperation or leisure. Aged care system administrators and managers who will be trained through the project interventions, and therefore will improve their managerial skills, are also secondary beneficiaries of the project.

25. Women are expected to be overrepresented among the beneficiaries of this project. With regard to the direct beneficiaries of the project, women have higher life expectancy and, on average, are more likely to have limited functional ability and be in need of care. Specifically, in Anhui, among those over 65 years old, 28.1 percent of urban women and 30.8 percent of rural women

[3] It is expected that over 358 thousand elderly will directly access services and infrastructure created in the course of the implementation of this project.

need help with at least one ADL/IADL activity, while the corresponding numbers for urban men and rural men are only 11.4 percent and 19.0 percent, respectively. With regard to the secondary beneficiaries of the project, women are overrepresented among both familial caregivers and formal caregivers.[4]

C. PDO Level Results Indicators

26. The project intervention expects to achieve the PDO with the following results in Anhui: (a) strengthened capacity of the government of Anhui to exercise stewardship over the diversified aged care service delivery system; (b) strengthened delivery capacity of the diversified service provision systems of aged care delivery in four municipalities; (c) improved balance of aged care services across three tiers of service in four municipalities; and (d) improved quality and access of aged care services for the key target group and main beneficiaries in four municipalities.

27. PDO-level Result Indicators:

(a) Number of direct beneficiaries at project sites, disaggregated by tier of care and gender;

(b) Percentage of dedicated public outlays for elderly care spent on purchasing aged care services from non-public providers in urban areas in the project sites;

(c) Share of aged care service providers who meet the requirements of construction and service standards in the project sites; and

(d) Number of aged care managerial staff who received training certificates financed by the project, disaggregated by gender.

III. PROJECT DESCRIPTION

A. Project Components

28. The project has four interlinked components: (a) Supporting the Development of Government Stewardship Capacity; (b) Strengthening Community-based and Home-based Care Services; (c) Strengthening the Delivery and Management of Nursing Care; and (d) Project management, Monitoring, and Evaluation.

Component 1: Supporting the Development of Government Stewardship Capacity (Total Cost: US$10.45 million, IBRD financing US$10.40 million)

29. This component will: (a) support development of a unified information system to facilitate both the development and management of the aged care service system; (b) design and pilot an assessment of functional ability and needs to improve the effectiveness and quality of care services; (c) establish a set of quality standards for aged care services; and (d) support training and building a professional workforce (managers and administrators) for aged care services. This set of activities to support government stewardship capacity is an innovative feature of this project.

[4] Based on CHARLS 2013 data and Social Analysis survey conducted by Anhui DOCA.

Subcomponent 1.1. Unified Information System

30. A unified information system will be designed in response to the needs of stakeholders and users, who will participate in the design process and provide their perspective at every critical stage, including design, development, testing, and assessment. The intended users of this system are: (a) DOCA and other government agencies that are responsible for policy making and stewardship of the industry; (b) members of the public who are seeking meaningful and accurate information on available aged care services, their prices, and quality; and (c) current and potential providers who require information about aged care demand, government policies, standards, and subsidies. To serve these three types of users, the system will comprise three subsystems: (a) a data collection system, which would collect essential data such as basic population information, needs assessment data, service providers' data, and information about government policies and standards; (b) a service management system, which would support DOCA and other government agencies in supervision, administration, and M&E (services provided, their price, cost, mix of services, client mix, customer satisfaction, complaints, and redress); and (c) an informational public interface system, which would contain information relevant for the public (to help choose services and service providers) and relevant to the service providers (to assist with business planning and development).

31. The system will establish two-way data sharing arrangements with other information systems (for example, the National Elderly Care Information System, municipal elderly care management information system [MIS], and provider MIS) to ensure data integrity and effective supervision. Its development will proceed in two steps; first, the overall architecture will be developed reflecting the business needs and processes, and second, the actual database, application systems, platforms and network interface will be developed within this overall architecture, built with hardware, software, and other equipment. The investment activities will include: (a) establishment of the provincial aged care data center; (b) development of comprehensive application platforms (including platforms for data collection, service management, information dissemination, and service delivery); (c) design of data, interface, and exchange standards to support the development of a unified provincial information system; and (d) migration of the current management and information system to the new platform. The sustainability of system operation and maintenance will be ensured by Anhui DOCA, whose administrative budget will cover operating expenditures. The loan allocation for this subcomponent is US$8.45 million.

Subcomponent 1.2. Functional Ability and Needs Assessment

32. A comprehensive functional ability and needs assessment system is essential for effectively determining the eligibility for public subsidies and priority access to aged care services, for carefully planning case management for delivery of customized care services, and for timely monitoring and managing the quality of aged care services. Accordingly, the activities under this component will include the following: (a) developing the provincial-level functional ability assessment standards and needs assessment instruments based on the national elderly ability evaluation standard issued by the Ministry of Civil Affairs,[5] while incorporating standards that are informed by both international experiences (International Resident Assessment Instrument

[5] *Guiding Opinions on Promoting the Standardization of Senior Care Services*, co-issued by the Ministry of Civil Affairs, the Ministry of Commerce, and several other government agencies in January 2014.

[InterRAI] in the United States, Aged Care Funding Instrument [ACFI] in Australia, Easy Care in the United Kingdom, and domestic pilots (in Shanghai and Beijing); (b) piloting this new assessment system in selected municipalities of Anhui (including in Anqing, Lu'An and Suzhou; see Components 2 and 3); and (c) providing training to professionals in third-party institution(s) to develop capacity for implementing the comprehensive assessment system.

33. After piloting the system, the results will be assessed and the design adjusted accordingly, before scaling it up province-wide. These activities will be financed by a loan allocation of US$0.62 million.

Subcomponent 1.3. Aged Care Service Standards

34. The standards for residential, community-based, and home-based aged care services will be developed, piloted, and implemented to improve the quality of service provision and management. Accordingly, under this subcomponent, the envisaged project activities will include the following: (a) as a short-term measure, a subset of the existing provincial standards will be reviewed right after the project implementation starts, before being published as guidelines to local governments and service providers; (b) a framework for provincial standards system to inform the establishment of a comprehensive standards system (in the medium term) will be developed; (c) a number of key provincial standards coordinated with the national standards and the industrial standards will be developed. The provincial standards will be developed across all segments of service provision (residential care, community-based care, and home-based care) and will consider all areas of standards development pertaining to accreditation and certification, that is, basic standards, service delivery standards, staffing standards, governance and management standards, M&E standards, and so on. The priority provincial standards for development as well as the procedures for their roll out and enforcement will be decided by the Government responsible agency based on the provincial requirements for quality assurance, monitoring, and management; and (d) the Government will continue developing tools and standards for public-private partnerships through commissioning, contracting, and purchasing (including providing guidance to Suzhou prefecture; see Component 3).

35. These technical assistance (TA) activities will be financed by a loan allocation of US$0.35 million.

Subcomponent 1.4. Professional Managerial Training and Capacity Building

36. Building and managing a professional workforce is one of the priority areas for policy interventions and the government in Anhui has developed a strategic plan to provide training for the workforce in the aged care sector. While the government established dedicated resources to implement this plan for the frontline care workers, there is need to focus on strengthening knowledge base and skills of the managerial staff. Accordingly, activities in this component will focus on the following: (a) upskilling of 500 aged care facility managers each year for four years in both the public and private institutions; and (b) training of 300 government officials in charge of the aged care sector each year for five years to upgrade their knowledge and administrative skills in managing the aged care sector, including managing commissioner-provider relations in the context of government purchasing of private services.

37. The activities of this subcomponent will be implemented both at the provincial level and at selected project sites. A total of US$0.98 million is allocated for this subcomponent.

Component 2: Strengthening Community-based and Home-based Care Services (Total Cost: US$42.64 million, IBRD financing: US$40.87 million)

38. This component will strengthen the delivery and management of community-based and home-based care services in two project cities. The funds will be used to finance civil works, goods, consulting services and capacity-building activities and will contribute to the services improvements envisaged by the authorities. The loan will also be used to directly finance payments to providers of community-based and home-based care services.

Subcomponent 2.1. Upgrading Community-based Service Stations System

39. Community-based stations will be developed (built, upgraded, refurbished, and equipped) in Anqing and Lu'An Municipalities. The preliminary assessment of the service stations' design and cost estimates show that construction and equipment needs vary across individual facilities because of the differences in their initial conditions. At this stage, the locations for the majority of service stations have been identified (for 114 stations in Anqing and 19 in Lu'An). There may be new locations to be identified during project implementation, and, given the fast pace of urbanization in Anhui, the already identified locations may change.[6] There will be no land acquisition for the development of the new stations and the sites will be selected through purchasing, repurposing, and leasing of the existing infrastructure. These stations will provide daycare and overnight care for the elderly in their communities. The activities of this subcomponent will be coordinated with the TA activities included in the first component of the project related to developing management and oversight of the publicly owned and privately operated delivery system. IBRD financing is US$17.96 million.

Subcomponent 2.2. Purchasing of Community-based and Home-based Care Services

40. IBRD funds will be used to purchase basic aged care services, the necessary TA and M&E and evaluation activities in Anqing and Lu'An Municipalities. Initially, following the current government regulations, *Sanwu, Dibao,* low-income empty nesters, and the oldest elderly will comprise the eligible groups whose functional ability and care needs will be assessed. The basket of basic services for the initial phase of implementation will also follow current local practices and include (among others) such items as visits to empty nester elderly, respite services, and personal care. At the same time, the Government in Anqing and Lu'An will initiate functional ability and needs assessments of a broader set of frail elderly, linked to the project activities, described in Component 1 (subcomponent 1.2). These two municipalities will provide inputs to the provincial-level activities for developing functional ability and needs assessment that, in turn, would be used for determining eligibility criteria and composition of the basket of basic services for categories of eligible beneficiaries. The Guidelines for the Purchase of Basic Aged-Care Services will be developed under the project and will detail the pricing methodology, procurement and disbursement procedures. Service providers will be selected through open competition and the

[6] A Resettlement Policy Framework (RPF) has been prepared in the event any additional land acquisition or resettlement emerges during project implementation, see Section E.

relevant agencies in Anqing and Lu'An will enter into service agreements with eligible providers for the provision of basic aged-care services, procured by the appropriate methods. The municipal Civil Affairs Bureaus will engage Independent Verification Agencies (IVAs) to validate the service delivery and a third party to conduct surveys to collect beneficiary feedback. Annex 2 provides further details. IBRD financing for this subcomponent is US$22.91 million.

Component 3: Strengthening the Delivery and Management of Nursing Care (Total Cost: US$136.9 million, IBRD financing US$58.88 million)

41. In urban areas, intensive skilled nursing has been identified as the segment with the most acute unmet current effective demand. In rural areas, welfare facilities provide sheltered accommodation to the elderly and needy rural poor, but these facilities are typically dilapidated and provide little nursing care. Accordingly, this component will: (a) strengthen the delivery and management of urban skilled nursing facilities in two project cities; (b) increase the capacity of government-run urban welfare homes in one project city; and (c) strengthen the delivery and management capacity of government-run rural welfare homes, including developing options for public-private partnership in one district and four counties of one project municipality.

Subcomponent 3.1. Urban Skilled Nursing Facilities

42. The construction of skilled nursing facilities will take place in Lu'An and Anqing Municipalities. The design and location of the facilities conform to good international and local practice of concentrating facilities in places with high population density and focusing on elderly people with significant limitations of their functional ability. In Lu'An and Anqing, nursing facilities will be attached to public hospitals. In Lu'An (a 500-bed facility), the nursing facility will be attached to a tertiary traditional Chinese medicine (TCM) hospital; in Anqing (a 1,000-bed facility) the nursing facility will be attached to the First People's Hospital and will have a hospice ward (in addition to other services). IBRD financing for this subcomponent is US$35.76 million.

Subcomponent 3.2. Urban Welfare Homes

43. This subcomponent will enhance the provision of skilled and semiskilled nursing care and long-term care services in welfare homes and strengthen their capacity to serve as regional platforms for training and outreach (to support provision of community-based and home-based care) by improving infrastructure and equipment in these homes. The clients of these services are both the indigent elderly (*Sanwu*, *Dibao*, low-income empty nesters, the oldest elderly) and self-paying customers who have significant limitations of their functional ability. The two project sites are located in Ningguo (county-level city) and Xuanzhou (district), which are under the administration of Xuancheng City. In Ningguo, 260 beds would be added in the existing welfare home, while in Xuanzhou the project will relocate the existing residential welfare home to a new location and increase its capacity to 400 beds. IBRD financing for this component is US$13.36 million, with about US$6.7 million allocated for each site.

Subcomponent 3.3. Rural Welfare Homes

44. Rural welfare facilities provide sheltered accommodation to the elderly and needy rural poor (*Wubao* seniors), especially important given the high outmigration from Anhui. These facilities are typically operated as group homes and provide little nursing care to elderly people

who need it. The project activities will focus on enhancing the provision services and strengthening facilities' capacity to serve as regional platforms for training and outreach (to support provision of community-based and home-based care) by building, upgrading, and equipping these facilities. As is the case with the urban welfare homes, these facilities will accept self-paying customers, but the Government will ensure the priority admittance of *Wubao* seniors and will continue providing for their cost. The Government plans to increase the nursing content of services provided in rural welfare homes and use these facilities as resource centers for nearby areas. The Government is also considering inviting private sector operators into this market segment, and will formulate a business plan on how to manage the development of the public-private partnership, linked to the project activities described in Component 1, Subcomponent 1.3. A total of 35 facilities located in one district and four counties of Suzhou Municipality will be upgraded and equipped in accordance with the relevant national and provincial construction standards, financed by an IBRD loan of US$9.77 million.

Component 4: Project Management, Monitoring, and Evaluation (Total Cost: US$2.68 million, all IBRD Financing)

45. This component will: (a) support project management and build capacity in general management and planning to ensure an effective and efficient project implementation; (b) provide technical guidance through a project expert panel (PEP) to support project implementation; and (c) support the monitoring of the implementation of project activities and the achievements of the intended results.

Subcomponent 4.1. Project Management and Capacity Building

46. This subcomponent will support the activities of the project Leading Group (LG), the operation of project management offices (PMOs) at the provincial and local levels, and the functions of the PEP at the provincial level. This subcomponent will also invest in capacity building activities for the project managers and operational staff at both the PMO and the Project Implementation Units (PIUs).

Subcomponent 4.2. Monitoring and Evaluation

47. This subcomponent will support the development of the project monitoring and evaluation mechanism, collect requisite data (including survey data), compile case studies of project innovations, and updates of the project progress and achievements. It will also support the dissemination of the project experience and lessons learned of the key project interventions and results.

B. Project Financing

48. The proposed lending instrument is Investment Project Financing to support the activities at both the provincial and local levels over a five-year period. The total project cost is US$197.84 million, of which IBRD financing is US$118 million and the counterpart funds are US$79.84 million. The Borrower has selected a US dollar denominated, commitment-linked loan, based on six months LIBOR plus a variable spread. It has also selected all conversion options, level repayment profile, a final maturity of 25 years, including a five-year grace period, with repayment dates of May 1 and November 1 in each year. The front-end fee, Cap/Collar premium, the

commitment fee and interest during implementation will be financed out of the loan proceeds. Based on the financial cost estimated by Anhui, the loan amount of US$112.83 million will be allocated to the project components. Retroactive financing of up to an aggregate amount not exceeding US$23,600,000 of the IBRD loan amount will be allowed for eligible expenditures incurred on or after May 15, 2018 and prior to the signature date of the Loan Agreement. The project costs and IBRD financing are summarized in table 2.

C. Project Cost and Financing

Table 2. Project Cost and Financing (US$, millions)

Project Components	Project Cost	IBRD Financing	% Financing by IBRD
Component 1: Supporting the Development of Government Stewardship Capacity	**10.45**	**10.40**	**100**
1.1 Unified Information System	8.50	8.45	99.5
1.2 Functional Ability and Needs Assessment	0.62	0.62	100
1.3 Aged Care Service Standards	0.35	0.35	100
1.4 Professional Managerial Training and Capacity Building	0.98	0.98	100
Component 2: Strengthening Community-based and Home-based Care Services	**42.64**	**40.87**	**96**
2.1 Upgrading Community-based Service Stations System	19.73	17.96	91
2.2 Purchasing of Community-based and Home-based Care Services	22.91	22.91	100
Component 3: Strengthening the Delivery and Management of Nursing Care	**136.90**	**58.88**	**43**
3.1 Urban Skilled Nursing Facilities	106.30	35.76	34
3.2 Urban Welfare Homes	17.83	13.36	75
3.3 Rural Welfare Homes	12.77	9.77	76
Component 4: Project Management, Monitoring, and Evaluation	**2.68**	**2.68**	**100**
Total Project Cost	**192.67**	**112.83**	**59**
Front-end fee	0.295	0.295	100
Commitment fee	0.35	0.35	100
Interest during implementation	4.52	4.52	100
Total Financing Required	**197.84**	**118.00**	**60**

Note: The exchange rate in the Feasibility Study Report prepared by Anhui DOCA is US$1=CNY6.8956 dated May 2, 2017.

D. Lessons Learned and Reflected in the Project Design

49. This is the first World Bank project globally focusing exclusively on developing elderly care service system. As such its design has been informed by the identification and prioritization of binding constraints for elderly care development, identified by the World Bank 2018 report "Options for Aged Care: Building an Efficient and Sustainable Aged Care System in China". In terms of its implementation modality, the project builds on the large and well-established World Bank portfolio of projects strengthening delivery systems for various health, population, nutrition, and education-related services across the world. There are also several projects that develop social care. These social care projects—mostly in the Europe and Central Asia and Latin America and the Caribbean regions—concern deinstitutionalization of children and adults, creating an institutional setting for functional ability certification, strengthening performance management, and reducing error and fraud. The project builds on the lessons of successful activities and interventions in all these areas. With regard to its country and provincial focus, the project builds on a long line of successful projects designed and implemented in China and in Anhui Province across various thematic areas. The following are the lessons learned both in China and elsewhere:

50. **Expanding social service provision in an area where private provision is increasingly prevalent first, and foremost requires nurturing the stewardship capacity of the Government in the sector.** As a regulator in the sector, the Government needs to assume responsibility for fostering, monitoring, and supervising the entire senior care market—public, private, and mixed, and all subsectors of this market (home-based, community-based, and all forms of residential care). This entails the establishment of a governance structure and regulatory system for maintaining efficient use of resources and quality of care and for supporting evidence generation, as well as the use of the evidence for strategic planning and management, including timely feedback to providers. These lessons are learned from both analytic work (in China and elsewhere) and also from the World Bank projects that developed social and healthcare services in areas where private sector provision is increasingly present (e.g. in India and Bangladesh). There is also a number of projects outside of the social sector provision in China that featured private sector provision and that emphasized developing governance structures to serve beyond the activities of a project, that also provide similar experience.

51. **Access to publicly financed and subsidized aged care should be prioritized not only for the poor, but also for those who are most in need of care: elderly with limited functional ability.** It is a common practice in all countries with developed long-term care systems that functional ability and needs assessment are used to determine both eligibility for publicly supported services and the most appropriate and cost-efficient mix of services that fit individual needs. This assessment, together with the means test, are typically used to determine the amount of public subsidy provided to an individual. As China does not have a regular, universal system of functional ability and needs assessment in place, it can build on international practices and local pilots. Encouragingly, some good practices exist at the local level, e.g., Shanghai piloted a universal needs assessment toolkit and this will inform project implementation activities.

52. **As the needs of clients change over time—either temporarily or permanently—a care continuum with the proper mix of services is needed to meet these changing needs. Aging in place is most common and desirable, based on considerations of consumer satisfaction and cost efficiency, and it requires development of home and community-based services.** The mix

of services provided across the three main tiers -- home, community, and institutional settings - varies and there may not be direct correspondence between the level of functional ability limitations or the needs of the elderly and the form of care provided. Services provided at home can range from domestic aid and personal care to supportive services and health services for bedridden elderly. Community-based services can include social and recreational services, as well as rehabilitation and some nursing services. Institutional care can include assisted living, food and accommodation, supervision of medical care, specialized care (for example, dementia care), and hospice services. Respite services that are critically important for familial caregivers can be provided in any of these settings. Ideally, there will be a continuum of aged care services that is diverse enough to encompass an optimal and flexible service mix to respond to the diverse needs and circumstances of the elderly and their families.

53. **The quality of care is ultimately determined by the capacity and the level of training of caregivers and administrators.** As in other countries, China has a shortage of qualified administrators and trained and skilled care workers. A recent review points out that there are shortages of most direct-care staff are migrant workers from nearby rural areas and are older and have lower educational levels than their counterparts in OECD countries. Few facilities use established qualification standards to prepare staff for their roles in the facility. The lack of adequately trained staff—among other factors such as inadequate regulatory oversight—is a major barrier to quality improvements in elder care in China. It is, therefore, timely that the project will undertake further development and strengthen the organizational and technical capacity of service providers in both the public and private sectors and across all care settings.

54. **Adequate resources are needed for TA in projects that have activities with high innovation content, as these require technical inputs and also institutional and capacity building.** Developing stewardship capacity in social sectors is a relatively new area and it requires both technical knowledge and institutional capacity building. Therefore, making sure that resources—both technical and human—are available for these activities is a precondition for successful implementation. Development policies, including planning and management capabilities for elderly care, are critical variables for quality care service delivery, and need TA activities. The stewardship and system improvement component of this project aims to strengthen the institutional structure and the management capacity, as well as establish a governance structure and regulatory system to improve the quality of care. Capacity building requires a number of inputs, including training, hands-on supervision by the Government and the World Bank, as well as active engagement in applied policy research. To this end, the project has allocated funding for capacity building and also for policy studies to adapt good international practices to local conditions. The project also supports establishing an Expert Panel to guide the further development of elderly care services.

55. **The scope of the M&E should be commensurate with the institutional and technical capacity of the client and strive to achieve the most learning from project interventions.** Specifically, it is important to consider carefully whether the gold standard in evaluation, such as a randomized evaluation or another type of impact evaluation (IE), is the right approach to learning the lessons from a project. Often, descriptive evaluations that combine quantitative and qualitative methods are more effective for exploring the pertinent policy and implementation questions, as opposed to data intensive IE, which, typically, evaluates only a particular aspect of a project. With respect to the M&E, the choice of indicators should reflect well the objectives and activities of the

project and realistic targets should be developed. When appropriate, the Results Framework should include gender and ethnicity indicators.

56. **Ownership and support from the central government is key for promoting innovations and developing engagements with new clients.** The large China portfolio demonstrates that while the buy-in and strong leadership from the line department is a necessary condition for a successful project in China, the national authorities' ownership is essential when dealing with a new client and promoting innovative approaches. This is because the national authorities' ownership can play a major role in mobilizing the attention and support of the concerned core agencies at sub-national level, including Finance and Development and Reform Commission (DRC). Elderly care is a priority for the national Government and the team benefited from working closely with the national-level authorities, both on the analytical underpinning and operational approaches to designing this project.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

Overall Institutional Arrangements

57. The project will be implemented in Anhui Province at the provincial, city and county /district levels. The DOCA of Anhui Province is the main implementation agency taking the overall responsibility for the project implementation and coordination. The project has established an LG to provide policy guidance and overall direction for the project. The PEP will be organized by the Provincial Project Management Office (PPMO) to provide TA to both the provincial and local levels. The day-to-day project implementation and management is the responsibility of the PMOs and PIUs at all levels (see annex 3 for details).

58. The World Bank will provide TA and implementation support for the project. As there is growing demand for elderly care lending in China, there are more elderly care operations at different stages of preparation in the current portfolio. Therefore, TA and implementation support for this project will be provided as part of broader knowledge and operational engagements in China which will allow for synergies and learning across the aged care portfolio. In addition to the technical issues, the implementation support will involve guidance and training on general aspects of project management, financial management (FM), procurement, and the social and environmental aspects.

Implementation Arrangements

59. **Project LG.** DOCA has established an LG headed by DOCA's Deputy Director General and consisting of heads of the relevant divisions/units within DOCA (including Social Welfare and Charity, General Office, Finance and Planning, and others), heads of the relevant divisions of Anhui Ageing Commission Office, as well as the Directors of Civil Affairs Bureaus of all project municipalities participating in the project. The LG will provide overall policy guidance and the direction of the project, take the responsibility for the coordination with other departments/agencies at provincial level, review the progress of the project implementation and advise on the dissemination of the project results.

60. **PPMO.** The PPMO housed in the DOCA has representatives of all relevant divisions/units of DOCA, including Social Welfare and Charity, Finance and Planning, Information Center, Social Assistance, and others. A Deputy Director General of DOCA is assigned as the Project Director overseeing the project implementation and coordination, and the Director of the Division of Social Welfare and Charity is assigned as the Deputy Project Director in charge of day-to-day operation and communication with internal and external partners. The PPMO will ensure the compliance of the World Bank-financed project requirements, including FM, disbursement, auditing, procurement, safeguards, and M&E. The PPMO will: (a) coordinate with the municipality/city PMOs and provide project management support, including the training as needed; (b) compile the annual project work plan and semiannual progress report; (c) set up the M&E mechanism to update the values of monitoring indicators and conduct thematic evaluation; (d) coordinate with the PEP who provides timely TA to project implementation; and (e) facilitate the communication with the LG, the World Bank, and the project municipalities. While the PPMO also takes the overall responsibility for the implementation of the provincial level activities, a sub-unit, consisting of representatives from the relevant divisions/units of DOCA and Ageing Commission Office to support the implementation of the corresponding subcomponent of Component 1 with clear roles and responsibilities defined, has been formed.

61. **PMOs.** The PMOs have been set up at the Civil Affairs Bureau in Anqing municipality, Lu'An Municipality, Suzhou Municipality, Ningguo County-level City and Xuanzhou District. The PMOs will follow a structure similar to that of the PPMO, and will be responsible for implementing the project activities at their level. The local PMOs will be responsible for: (a) the FM, disbursement, auditing, procurement, safeguards, and M&E during the implementation; (b) making an annual work plan and semiannual reporting; and (c) coordinating with the LG, PPMO, EP, and PIUs. The PPMO and all PMOs will be fully staffed throughout the period of project implementation with a Project Director, a Deputy Director, and designated officers in charge of FM, procurement, M&E, as well as general management and coordination.

62. **PIU.** The PIUs are the frontline implementers and owners of the project activities. They will work under their parent PMOs to implement the project activities. Each PIU is responsible for day-to-day FM. All the PIUs will support their parent PMOs in procurement activities and some will play a major role in procurement. Table 3.1 in annex 3 presents a full list of the PIUs and their correspondence to the parent PMOs. Several PMOs have more than one PIU.

63. **PEP.** The project PEP will be established at the provincial level to serve the project as a technical advisory body. The PEP will consist of leading experts within the province and nationwide in key areas of project intervention such as functional ability assessment, quality of services, service provision, information management, civil engineering, M&E, capacity building, and other areas of expertise. The PEP will advise the project contents, analyze the issues and recommend solution options, and comment on the TA designed under the project.

64. **Operations Manual (OM) and the Guidelines for the Purchase of Basic Aged-Care Services**. The OM details procedures for implementation of the project activities and monitoring of compliance with both the World Bank operations policies and procedures and the domestic regulations and rules. The OM specifies implementation steps for procurement, FM, disbursement and M&E. The Guidelines for Purchase of Basic Aged-Care Services will be developed to set forth the definitions, pricing, eligibility criteria, as well as the procedures for contracting eligible service

providers, the disbursement, procurement, and financial management of the activities under Subcomponent 2.2. The OM and the guidelines should be reviewed and acceptable to the World Bank, and will be formally endorsed by the provincial DOCA. They will be updated periodically by the PMOs in consultation with the provincial DOCA with the prior written agreement of the World Bank.

B. Results Monitoring and Evaluation

65. The objective of the M&E activities is to: (a) track the progress and provide timely feedback on the implementation status and deliverables to the PPMO, PIUs, and to the World Bank team; (b) estimate the effectiveness of the intervention; and (c) summarize lessons learned from the design and implementation that can be applied to future similar interventions in other provinces.

66. A set of results indicators has been developed and proposed by the Government and the World Bank teams to measure project outputs, intermediate outcomes, and final development outcomes (see annex 1). Most of these indicators will be tracked on an annual basis by the implementation units and reported in the World Bank's Implementation Status and Results Reports. To the extent possible, the results M&E arrangements for the project will be integrated into the existing data collection and utilization mechanism of the PMOs and its subordinate agencies for the project.

67. Three types of M&E activities will be undertaken to monitor and assess the progress and achievement of the PDOs, including: (a) regular monitoring, (b) a midterm review (MTR), and (c) an impact assessment of the project outcomes at the start and end the project.

68. **Regular monitoring** will look at the extent to which the proposed project activities are being implemented as planned and at the direct outputs. The M&E activities will be conducted under Component 4 and will be led by the PPMO of Anhui DOCA. Monitoring of the PDO-level indicators will be carried out through the PMOs at the provincial level and each project site, monitoring intermediate outcomes will be conducted with administrative data and surveys, and the final outcomes of the project interventions will be evaluated by undertaking an impact assessment. The baseline and follow-up surveys will be carried out to support the evaluation.

69. Beyond monitoring the implementation of the project, the project will also help develop a provincial information system that is designed to collect the essential data, aiming to help the government of Anhui Province manage a diversified aged system. This activity will include the development of monitoring indicators and capacity building on database management and maintenance. The content will be determined by the provincial DOCA in coordination with other provincial agencies, local governments, service providers and operators, and customers. Data will be collected through administrative sources and various surveys by DOCA and local governments.

70. **An MTR** will be conducted during the third year of project implementation (or earlier) and the PPMO will consolidate an MTR report and submit it to the World Bank. In addition to monitoring the achievement of the PDO indicators and intermediate results indicators, the MTR will also attempt to analyze the early results of the effectiveness of the project, including examining the emerging evidence of the project's effect on availability and quality of aged care services.

71. Most data for measuring outputs and intermediate outcomes will be collected through administrative sources. At the same time, two indicators – the satisfaction of consumers and their families with aged care services, and the time use of family caregivers – will be collected through special purpose surveys. Additionally, a series of focus group discussions, interviews, and case studies will be conducted to summarize lessons learned and experiences accumulated during the first half of the implementation. The findings of the MTR will be fed into the project implementation and help the project refine and adjust the next stage of activities as needed.

72. **Evaluation**. The evaluation will assess to what extent the PDOs have been achieved. The evaluation will be carried out at two levels. At the overall project level, the assessment will examine trends in the key outcome measures at the entry, midterm, and closing points of time. At the component level, the PPMO will conduct three waves of a survey (baseline, midpoint, and closing) to measure client satisfaction (covering direct consumers and their families) with receiving various aged care services. The evaluation will identify lessons on the types and modalities of interventions that work effectively and efficiently in contributing to the project achievement, as well as highlight factors that can enhance or hinder the effectiveness and efficiency of various interventions.

73. To complement the quantitative data analysis, the evaluation will collect qualitative data from various stakeholders to enrich information and analysis, such as by interviewing stakeholders (the elderly and their families, formal and familial caregivers, community groups, public and private providers, local government officials, project leaders, and PPMO staff) and by a desk review of a variety of forms such as research articles, policy notes, and other knowledge products.

74. The World Bank considered an IE in addition to the evaluation mentioned earlier, but determined that the activities of the project are not amenable to a meaningful IE. Instead, using the funds secured from the 'EAP Umbrella Facility for Gender Equality', the World Bank is fielding a baseline survey to answer broad structural questions regarding salient features of demand for and supply of care in the project locations as well as the impact of care provision on family caregivers. The survey combines quantitative and qualitative techniques. The sampling frame for urban areas covers a selection of districts in Anqing and Lu'An, and then households, residential facilities, and residential communities in each. For rural areas (in Suzhou) the sampling frame covers counties and then townships in each of them. In residential and community facilities the survey questions cover information on the facility's operation, human resources, service supply, pricing, financing, and quality of care. The survey questionnaires also collect information on sociodemographic and needs characteristics of users, time use and other characteristics of familial care providers and various key attributes of the supply of aged care in the district. These are accompanied by qualitative interviews with the key stakeholders in charge of elderly care services using semistructured interview outlines. The intention is to field wave two of the survey midway through project implementation and wave three at the end of the implementation of the project, to understand changes in patterns and impacts. The World Bank task team is making concerted efforts to mobilize resources for waves two and three; the project intermediate outcome indicator 11—the time use of family caregivers — will be measured through these surveys.

75. The PPMO will provide overall leadership and management of the regular project monitoring, MTR, and evaluation. Independent consultants or consulting firms will be procured to

undertake the M&E activities, including baseline data collection, database establishment, data aggregation, data analysis, and other data collection efforts during the MTR and project evaluation.

76. To strengthen the PPMO and implementation units' M&E capacity, the World Bank team will provide TA on M&E capacity building during the implementation of the project, as needed, to ensure that the M&E function has been established and integrated into the project.

C. Sustainability

77. The proposed project has strong support from political, technocratic, and industry quarters. With a shared understanding of the challenges that ageing brings to China, the policy directions and outcomes of elderly care development are followed and debated in society through social media and in the press. The emerging social contract is that Chinese citizens expect the Government to facilitate wide availability of elderly care services and ensure their quality. These considerations generated a high level of political commitment. As a testament to this political commitment, the 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System issued by the State Council in February 2017 pledged vigorous development of elderly care services. It set measurable targets concerning coverage of the elderly with health support services, strengthening skilled nursing content of care, enriching the spiritual and cultural life of the elderly, and involving the private sector in service delivery.

78. This high-level political commitment ensures the institutional sustainability of activities consistent with these policies. The Ministry of Civil Affairs and the associated departments at the provincial and local government are entrusted and held accountable for the development of action plans and their implementation and for reporting on achievements. Accordingly, there is strong ownership of the service delivery agenda by provincial departments overall and in Anhui DOCA in particular, and increasing coordination with the other agencies (the Health and Family Commission, the Ageing Commission Office, Industry Associations, and so on). A similar arrangement exists at the local, municipal, and township levels.

79. With regard to the sustainability of public investments in elderly care, even though these continue to rapidly increase, they remain considerably below the level of OECD counties. The 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System mandated that over 50 percent of all outlays of the 'Welfare Lottery Fund' be used for elderly care development. In 2016 the 'Welfare Lottery Fund' was CNY 51.9 billion (US$7.4 billion) and public outlays for elderly care represented about 0.02–0.04 percent of China's GDP. At the same time, the Government firmly decided that, while it will continue financing services for the indigent poor elderly and facilitate elderly care development though policies and subsidies, individuals and households will shoulder most of the cost of elderly care. There is no social insurance for elderly care in China at present and, while a number of provincial governments are now conducting pilots to develop financing models for elderly care, they do not intend to provide financial protection for a comprehensive set of services for broad strata of the population. Private demand for elderly care is strong, but is sensitive to quality and price. Academics and practitioners are looking for solutions on how to combine public and private resources for the most efficient and equitable outcomes. Accordingly, this project builds on the existing strong institutional ownership and lays the foundation for models that promote government purchasing of home-based

and community-based services and that promote publicly contracted (and owned) and privately operated institutional services.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

80. The overall risk rating is Substantial. In the Systematic Operations Risk-rating Tool (SORT), the following risk categories are rated Substantial: (a) Technical Design of Project; (b) Institutional Capacity for Implementing and Sustainability; (c) Fiduciary; and (d) Stakeholders.

81. The project has proposed a series of innovations in governance and delivery of aged care services at the provincial level and in four municipalities in a decentralized setting. In view of the diverse technical and implementation capacity of the participating municipalities and counties, the risk for project implementation is considered substantial. Project activities include strengthening the capital base for service delivery (in both urban and rural areas), improving quality of services, and assisting the Government in further developing its stewardship role to manage public and private providers. Participation of nongovernment providers in the delivery of social services is relatively new to Anhui, but the TA and policy studies designed at the provincial level as project activities will help mitigate these risks. The stakeholder risks are mainly associated with the cross-sectoral nature of the aged care system. Accordingly, a coordination mechanism—the project LG—will be established to facilitate communication and decision making.

82. The fiduciary risks are due to the lack of experience of the primary counterparts in Anhui with World Bank-financed projects in procurement and FM among the project implementation entities. These risks will be mitigated by: (a) training provision to PMO and PIU staff; (b) preparing OM including Procurement Management Manual (PMM) and Financial Management Manual (FMM), and a Guidelines for the Purchase of Basic Aged-Care Services, acceptable to the World Bank; and (c) hiring an experienced procurement agent, seasoned civil engineers, and qualified FM consultants/firm. Risks associated with the innovations of output-based disbursement in case of home-based services are mitigated through development and application of detailed guidelines.

83. Risks related to the technical design of the project arise because the project will address the multiple dimensions of aged care service provision and management. These include creating actual physical capacity for delivering a balanced mix of services, while at the same time advancing the stewardship functions, including technical capacity in functional ability assessment, quality monitoring, information management, and commissioner-provider relations. In addition, the project will address these challenges in multiple locations across Anhui Province. Together, these are complicated for a single project, but they are strongly desired by the client. From a technical viewpoint, it is also important to have a system-wide perspective on project-supported activities in order to support the balanced, mixed and well-regulated system which Anhui aspires to. To this end, the team is putting concerted efforts to strengthen managerial capacity at the provincial and local levels to develop and oversee all of these activities and to bring them together under a coherent framework. In addition, these risks are mitigated by the existence of a strong PPMO housed directly in the DOCA and led by an experienced civil servant with a direct channel of communication to the director and the Deputy Director General in charge, as well as to the

Director General. There are good communication channels between the PPMO and the municipal- and country-level PMOs. Further, there is high-level attention to the project from both the national and provincial authorities and the team is proposing an early MTR to assess progress and needs for reorientation.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

84. The economic benefits of public investments in elderly care development are realized through two main channels.[7] First, the availability of quality elderly care reduces the rate of public and private expenditures on medical care due to substitution of more expensive medical care with less expensive social care, and reduction in injuries and, consequently, reduction in in-patient and out-patient admissions and hospital stays. In addition, there is reduction in episodes of physical and physiological illness among the family care providers and, therefore, reduction in the rate of their use of prescription medications and medical services. Second, the availability of quality elderly care increases earnings in households with prime-aged adults and elderly needing care as a result of freeing adult children caregivers' time for the labor market. An analysis performed for the activities proposed in this project shows that the internal rate of return (IRR) is 14 percent, with the estimate being robust under the various assumptions. See annex 5 for detailed economic and financial analyses.

85. The gaps in availability of affordable elderly care services in the absence of public intervention arise due to a series of market failures, in information, pricing, individual assessments of risk and myopia, moral hazard and other factors. The reasons why virtually all developed countries channel public resources to pay for a substantial share of total long-term care costs for eligible recipients represent a mix of economic and social considerations. Governments channel public financing to long-term care not only to relieve family members of performing care work to participate in the labor market, but also because long-term care services are not affordable for the vast majority of elderly people in need of care. Considerations of being in need of care are a critically important part of the social contract, because the availability of elderly care enhances the opportunities of the elderly to live with dignity. Most middle and upper income countries direct public resources to help those who do not have the ability to live independently, including the ability to perform activities such as bathing, dressing, self-feeding, attending to personal hygiene, and toileting. Previous World Bank projects for care and social services based their benefit analyses on these considerations of social contract alone.[8]

86. There is also a strong equity argument for public investments promoted in this project. In addition to serving many indigent elderly directly, project interventions are expected to improve the overall quality of elderly care services. As a result of project activities there will be a greater overlap in the services used by both the poor and the middle class. This will help overcome the well-known problem of quality of services targeted primarily to the poor, that is, "programs for the poor are poor programs". The literature shows a strong effect of increased quality and service

[7] The third channel is direct job creation for formal caregivers.

[8] For example, Albania Social Services Delivery Project (P055383); Maldives - Integrated Human Development Project (P078523); and Armenia Social Protection Administration II Project (P146318).

satisfaction among the beneficiaries of various social services programs created for the poor, once the middle class also has a stake in these programs. It is the oversight and citizens' pressure on authorities that the middle class typically provides (and that the poor typically are not able to provide) that leads to improved quality of services.

87. In addition, the project will directly create new jobs for formal caregivers and will facilitate the further creation of caregiving jobs through developing the stewardship functions.

88. The financial analysis shows that the provincial government and the governments of the participating prefectures and counties are fully able to provide counterpart funds for the project activities. Compared with the fiscal revenues of these governments, the loan repayment funds required are low. Further, analysis conducted at the level of project entities shows that all project entities are capable of repaying loans and funding the incremental operating costs from their own inflow of operational revenues (which combine government subsidies and income from fees).

B. Technical

89. The project draws on good-practice approaches to the development of elderly care service provision, both international and local, and its proposed activities are appropriate to the needs of the Anhui Government. Specifically, the project design draws on the approaches laid out in the World Bank 2018 report "Options for Aged Care: Building an Efficient and Sustainable Aged Care System in China," and its activities are also aligned with Anhui Action Plans. The main innovation in the project is a strong emphasis on developing the stewardship capacity of the government, with resources devoted to 'soft' activities such as functional ability and needs assessments, standards development, and executive training. Developing stewardship capacity is critical at this juncture, because of the national authorities' emphasis on private provision of elderly care services. This project will exemplify the main building blocks for stewardship, including how to decide who should have access to publicly supported services, what basket of services would different groups receive, and how to determine and enforce quality standards. The project will also build an information system for planning, monitoring, and outreach.

90. The project advances another critical imperative in China which is promoting ageing in place by developing a continuum of aged care services. In this respect the project departs from previous emphasis in China on residential developments for healthy elderly, and, instead focuses on market segments that are currently underdeveloped: skilled and semiskilled nursing care, community care, and home care. Overall, the project concept is fully consistent with the 2017 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System, and Anhui Action Plans and puts their ideas into practice.

91. The current design of the project was developed through a lengthy consultative process. It reflects significant modifications introduced in the course of project preparation. Most importantly, activities initially proposed by the authorities—the Jingxian County Geriatric Rehabilitation Center in Xuancheng that targets upper-income consumers and a wellness tourism base for the elderly in Qianshan County, Wansui Valley National Conservancy Park—have been excluded from project activities because they did not support the PDO. At the same time funds allocation for community-based services and home-based services have been increased. The current project design also reflects considerations of cost efficiency and feasibility, as it replaced a proposed

construction of a tertiary technical and vocational education and training college for human resources training with designated training funds, reduced the number of rural residential facilities to be upgraded, and did not pursue some potential investments for environmental and other reasons. The last-minute change in the design – the exclusion of activities in Wuhu municipality that would have been focused on piloting the 'Haoyan Rainbow Park' aged care delivery chain and would have been owned and managed by a joint venture company with a mixed ownership structure – occurred because of the coordination problem between the local government and the joint venture regarding the loan repayment arrangements.

C. Financial Management

92. The Anhui PPMO, housed in the DOCA of Anhui Province and the five municipal and city/district PMOs, housed, respectively, in the Civil Affairs Bureaus of Anqing Municipality, Lu'An Municipality, Suzhou Municipality, Ningguo City, and Xuanzhou District, will be responsible for project management and coordination. These entities will manage and coordinate the overall project activities and the components executed in their respective municipalities or districts. The PIUs will be responsible for the day-to-day project FM work, including project accounting and financial reporting. The PPMO will consolidate the project financial statements and submit a consolidated copy to the World Bank.

93. The Anhui Provincial Department of Finance (DOF) will manage the Designated Account (DA). The DOF has extensive experience with the World Bank's disbursement and FM-related requirements.

94. The World Bank's assessment of the project FM arrangements determined that the principal FM risk is due to the lack of experience of the financial staff across the PPMO, PMOs, and PIUs with FM rules in World Bank-financed projects which may cause misuse or inefficient use of the project funds. The following risk management measures will be implemented to mitigate the abovementioned risk: (a) preparation and issuance of a FMM acceptable to the World Bank to standardize the FM procedures of the project; (b) extensive FM training by the World Bank and by the DOF (which has experience with World Bank-financed operations and agreed to arrange additional workshops and peer-to-peer learning activities); and (c) outsourcing qualified consultants to strengthen FM guidance and supervision for the PPMO and the project companies as needed.

95. With implementation of the proposed actions, the FM arrangements satisfy the World Bank's requirements under OP/BP 10.00. See annex 3 for additional information.

D. Procurement

96. The PMOs housed in Anhui DOCA and Civil Affairs Bureaus of Anqing, Lu'An, Suzhou, Ningguo and Xuanzhou will serve as the implementing agencies to undertake procurement in their respective jurisdictions. First Renmin hospital in Anqing, TCM hospital in Lu'An and Welfare Home in Ningguo will be responsible for procurement in their respective jurisdictions. The procurement capacity assessment concluded that the principal procurement-related risks are the lack of experience with World Bank-financed projects among the procurement staff in the PPMO, PMOs, and PIUs and their possible reliance on domestic procurement practices. These risks will

be mitigated by the following measures: (a) hiring an experienced procurement agent; (b) continuous training staff during project implementation; (c) hiring a project management consultant by the PPMO to assist with design review and project management; (d) preparing a PMM, acceptable to the World Bank, by project negotiations; and (e) developing customized procurement approaches for the purchasing of home-based aged care services.

97. The specific activity for purchasing basic aged-care services will be carried out using the performance-based procurement approach in accordance with the Guidelines for the Purchase of Basic Aged-Care Services which is being developed. The applicability, eligibility criteria, pricing, methodology and rules for contracting service providers as well as the approaches for revising and updating these procedures in the course of the project implementation will be elaborated in the guidelines. The guidelines will also define the main responsibilities of the PMO, including reviewing the proposals, assessing reasonableness of cost, approving acceptable plans for the purchase of services, verification requirements, and maintaining all relevant records for the World Bank's post review and audits when requested.

98. The project is prepared under two procurement guidelines: 'Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers' dated January 2011 and revised July 2014, and 'Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers', dated January 2011 and revised July 2014.

E. Social (including Safeguards)

99. The project is expected to bring significant social benefits, as it directly supports the frail elderly who are poor, have low income or lower-middle income and creates jobs. A comprehensive social assessment (SA) conducted by the PPMO covered government agencies, medical establishments (surveying doctors, nurses, and other health workers there), the elderly themselves (including younger elderly and older elderly), their formal and familial caregivers, and other members of communities and institutions where they live. The assessment covered urban and rural areas and inquired about accessibility and the quality of the existing services and future needs. The assessment was based on deep local knowledge and understanding of aging and the problems it brings in Anhui and followed a predetermined sampling frame. The SA confirmed that under the proposed design, it is the poor, low-income, and lower-middle-income groups, especially those with limited functional ability, who will benefit most from the envisaged interventions. The SA included public consultations and focus group discussions that confirmed the same.

100. **Resettlement Action Plan (RAP).** The project triggers OP/BP 4.12 Involuntary Resettlement. The RAP considered avoidance to land acquisition and resettlement relocations. Xuancheng municipality has land acquisition and resettlement which affected 29 households consisting of 94 persons. The RAP described the following adverse impacts related to transferring a welfare home to a new location: (a) taking about 61.35 mu (4 ha) of collective land, which affected 28 families consisting of 92 persons; and (b) structure demolition conducted on 1,268.64 m^2 of land, which affected 6 families consisting of 21 persons. Consistent with World Bank Policy OP 4.12 on Involuntary Resettlement, the objectives of the RAP have been to ensure that incomes and living standards are improved (or at least restored) for all persons adversely affected by the project. Special care has been taken in the RAP to ensure that rehabilitation measures are sufficient

where land expropriation from peri-urban areas is comparatively high. As far as the legacy issues of allocating resettlement houses for the 306 households in Lu'An and Anqing is concerned (see below), actions such as M&E will continue to be taken to ensure that these legacy issues are fully resolved as soon as possible during the project implementation.

101. **Resettlement Policy Framework (RPF).** An RPF was prepared in the event any additional land acquisition or resettlement emerges during project implementation. With regard to upgrading community-based aged care service stations, it is planned that each service station will only need around 0.5 mu of space in existing building. In most case, the building for such service station will be on public land. The RPF provides principles, procedures, and a legal framework to guide future involuntary resettlement.

102. **Due Diligence Reviews (DDR).** DDRs for two hospitals (in Anqing and Lu'An) that envisage large scope civil works were conducted. The DDRs concluded that most compensation and resettlement were completed by December 2015. However, in case of Lu'An hospital land acquisition of 31.7 mu, there were 111 households remaining in transition for resettlement houses. The resettlement site called "Lijing Yuan" was nearly completed in December 2017 and it will be ready for receiving the resettled households by July 2018. In the case of Anqing hospital, the land acquisition of 282 mu for the construction of this hospital started in 2014 and was completed in 2016. The construction of the hospital is nearly finished. (The IBRD loan will support equipment for aged care provision within the hospital). There were 195 affected households in transition waiting for resettlement houses at the time of the project appraisal. The resettlement site called "Nanshan Xiaoqu" has all buildings completed and has enough houses to resettle all households. The resettlement is planned for 2018. The displaced people have been receiving transitional living subsidies and are willing to wait to move to the resettlement sites that will be ready in 2018. Concerted efforts will be put in place (including monitoring and evaluation) to ensure that the resettlement is completed in full and that the legacy issues are resolved in full during the project implementation.

103. **Public consultation and information disclosure.** All displaced households in village communities have been identified through survey, interviews and group meetings. The RAP and participatory report focusing on peoples' needs for this project and the resettlement have been advertised on the local government website. Information about the project and resettlement policy information is available on the Xuancheng municipal website. A hotline for information disclosure has been set up, and a project officer in the PMO has been assigned the responsibility of answering questions related to the project information and the resettlement policy. Project information has also been provided to the affected village through newspaper reports, posters, and public meetings. A resettlement information booklet with information about compensation rates and grievance procedures will be distributed to the affected communities before the resettlement implementation. The SA was disclosed both in-country and at the World Bank external website on November 23, 2017. The final RAP, DDR and RPF were disclosed in-country on January 3, 2018 and on the World Bank's external website on the same day.

104. **Participatory strategy.** Focus group discussions (45 in total) and key informant interviews (25 in total) have been conducted to consult with potentially affected communities and individuals, the envisaged beneficiaries of the project and other project stakeholders. The primary focus of the consultations has been on obtaining views about the needs of citizens and their preferences

regarding resettlement modalities and mitigation measures, including land rehabilitation measures. These views and preferences have been considered during the project design and the RAP revision. Currently, the majority of potentially affected persons agree that the resettlement and rehabilitation measures planned under the RAP would be adequate to address and mitigate any adverse impacts.

105. **Gender.** The project is gender-tagged. The World Bank team and the Anhui DOCA team, conducted analyses of representative household surveys (chiefly 2013 and 2015 CHARLS) and SA, respectively, to ensure that the project contributes to closing the various gender gaps in Anhui. Findings from CHARLS and views and expectations of both male and female beneficiaries and caregivers recorded by the SA have been duly incorporated in the design of project interventions. The SA consulted both men and women equally during project preparation and this approach will continue during project implementation. Both SA analysis and analysis of household surveys show that women are expected to be overrepresented among beneficiaries of the project going forward.

106. With respect to direct beneficiaries of the project, women will more likely to benefit given the considerably higher life expectancy among women in China (79.3 years for women vis 73.6 years for men) and their greater need for care (which, on average, increases with age). Currently, quality elderly care services are not affordable for the vast majority of elderly people in need of care, many of whom do not have the ability to perform activities such as bathing, dressing, self-feeding, attending to personal hygiene, and toileting. Project interventions will increase access to care and, consequently improve quality of life (and ability to live with dignity) for these vulnerable groups. Female potential beneficiaries who were interviewed by the SA expect that the project will create and upgrade facilities with more recreational equipment, the staff will receive better training, and aged care services will be better integrated with medical services.

107. With respect to other beneficiaries of the project, the SA survey shows that the majority of aged care workers in project locations are female, accounting for 65 percent of all care workers, with this proportion being higher among care workers engaged in providing community-based and home-based care. Most care workers are between 40 and 50 years of age, and some are older. Stakeholders expect that the project will create many new jobs and positions in the aged care service industry, which will have a positive impact on female employment prospects in project localities. Formal elderly care workers (both male and female) were interviewed by the SA and they expect that the project would improve their working environment and conditions and allow for improved career opportunities. Stakeholders agree that the availability of formal care will reduce the burden of care, which is usually the responsibility of female family members.

108. The project is expected to have an impact on the East Asia and Pacific (EAP) regional gender priority gap which is to reduce trade-offs between women's household and market roles.[9] The major impact is expected through increasing female labor force participation (LFP) and, potentially, their voice and agency. This impact is expected because women are more likely to have family caregiving duties and multidisciplinary literature conclusively established that their welfare, on average, is reduced due to having to perform these caregiving tasks, especially when no formal alternatives are available. Adult Chinese women are also more likely to withdraw from the labor markets earlier than their male counterparts or female counterparts in comparator

[9] See "Toward the Gender Equality in East Asia and the Pacific; East Asia and Pacific Regional Gender Plan 2017-2023" for the description of five priorities for closing gender gaps in the EAP region.

countries, including due to high burden of providing elderly care. Therefore, the availability of alternative care that could substitute for the care they provide gives them choices and, if they choose to avail formal care, the freed time can be used for labor market work and recuperation or leisure. Increased LFP is expected to increase women's earnings and improved leisure time is expected to contribute to the improved opportunities to exercise voice and agency. The relevant results indicators are Intermediate Results Indicator 11 'Weekly time use of family caregivers who provided aged care to their elderly recipients' and Intermediate Result Indicator 6 'Number of households with family caregivers who received respite services at the project sites'.

109. At the implementation level, the project will monitor social, economic, and gender inclusion during project implementation through periodic reviews and regular implementation support.

110. **Citizen engagement.** The project will create an open and fair environment to enable civil society organizations to participate in the project activities by providing care services, carrying out communication and outreach campaigns, acting as a third party to validate services, and performing other functions. The project will develop a public consultation action plan, at the implementation stage, to increase awareness of all stakeholders and collect their feedback to ensure smooth implementation. The project will also establish a grievance redress mechanism at the provincial DOCA with sub-branches at the local PMOs and designated officers responsible for addressing complaints collected through the hotline and the dedicated website. The Results Framework contains an indicator measuring the satisfaction of consumers and their families with aged care services. The PPMO will monitor the progress and conduct surveys to collect data both from direct consumers and their families at the beginning, midpoint, and completion phases of the project.

F. Environment (including Safeguards)

111. The project is classified as a Category B project and triggers OP 4.01 Environmental Assessment.

112. The project will not have any significant adverse environmental impacts, given that the investments are mainly for the rehabilitation of existing aged care facilities, which are distributed across five districts and cities (that is, Xuanzhou, Ningguo, Lu'An, Suzhou, Anqing) in Anhui Province. The rehabilitation includes small-scale civil works and provision of equipment for existing community-based and home-based care facilities. The scale and size of the new construction will vary from community-based care facilities to two nursing facilities. The potential principal adverse impacts include construction-related impacts, including dust, noise, wastewater, and short-term disturbance to local communities. Adverse impacts during operation include disposal of domestic waste and wastewater from these facilities and a limited amount of medical waste from the nursing facilities. Due diligence conducted confirms that the waste and wastewater could be collected and disposed by the existing treatment facilities in accordance with relevant Chinese regulations.

113. **Environmental and Social Management Plan (ESMP).** An ESMP has been developed for the project. The ESMP summarizes the key environmental impacts and risks and proposes site-specific mitigation measures for design, construction, and operation, including: (a) provision of

collection and treatment facilities for wastewater and waste to be generated at the aged care facilities; (b) provision of firefighting facilities; (c) requirements for universal access design of the facilities to be rehabilitated and constructed under the project; and (d) Environmental Code of Practices (ECOPs) for construction (see ESMP's annex 1). These measures for the construction phase will be included in bidding documents and the implementation of the mitigation measures will be supervised by the relevant institutions. Specific mitigation measures during operation include: (a) disposal of waste and wastewater from these facilities; and (b) maintenance of safety facilities and an emergency plan for accidents. The ESMP also includes a social impact management plan, and specifies a monitoring plan (for example, for waste, noise monitoring, and so on), institutional arrangements (for example, duties and responsibilities of stakeholders), capacity building (for example, training in environmental management), and an estimated budget of the ESMP implementation.

114. **Environmental and Social Management Framework (ESMF).** Given that the project may consist of some activities for which impacts cannot be determined until the activity details have been identified during project implementation, an ESMF has been prepared, setting out the guidelines and procedures to address the environmental impacts of the project activities.

115. **Public consultation and disclosure.** In accordance with OP 4.01, public consultations have been conducted during the environmental assessment (EA) process, including meetings with project-affected people and local Environmental Protection Bureaus. The consultation on the EA safeguards document was undertaken from 2016 to July 2017. Feedback and concerns from the consultation have been addressed in the project design and in the EA documents. The draft EA documents were locally disclosed on the government website on July 21, 2017. The final ESMP and ESMF were disclosed in-country on December 21, 2017, and were disclosed on the World Bank's external website on December 27, 2017 and December 28, 2017 respectively.

116. **Climate co-benefits.** The project aims to achieve substantial energy efficiency improvements in the establishment and operation of aged-care facilities under Component 2.1 and Component 3. Both the provincial government and local authorities are committed to an improved design that adopt energy efficiency measures exceeding the standard requirements set by the relevant government documents, including Public Building Energy Efficiency Design Standards (GB50189-2015), Anhui Province Public Building Energy Efficiency Design Standards (DB34-1467-2011), and others. The provincial government also emphasizes utilization of renewable energy in the aged care facilities. According to the analysis presented in the Energy Saving Assessment Report prepared by Anhui, taking the energy efficiency improvement measures, will lead to a reduction in energy consumption by floor area from 13.85 kgce/m^2·a to 13.24 kgce/m^2·a, representing a reduction of 4.4 percent. The total annual energy savings are estimated in tune of 160 tce, equivalent to approximately 442 tons of CO_2 emission reduction per year.

117. These energy savings are mainly brought about by the improvements in architectural design, electricity and water utilization, heating/cooling systems design, insulation, and adoption of renewable energy equipment. More specifically, the Energy Saving Assessment Report prepared by Anhui shows that installation of LED lighting in the aged care facilities will reduce power consumption by an estimated 554,200 kWh annually, equivalent to 68 tce (standard coal equivalent). It also shows that installation of solar water heating system in the skilled nursing homes and welfare homes under Sub-component 3.1 and 3.2 will save about 148,000 m^3 of natural

gas annually, but consume electricity of 715,400 kWh, providing an annual net energy saving of 92 tce. Evidence and key indicators illustrating energy savings due to these measures are detailed in annex 3.

G. World Bank Grievance Redress

118. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring

CHINA

Anhui Aged Care System Demonstration Project (P154716)

Results Framework

Project Development Objectives							
The PDO of this project is to support the government of Anhui in developing and managing a diversified, three-tiered aged care service delivery system for the elderly, particularly those with limited functional ability.							
These results are at	**Project Level**						
Project Development Objective Indicators							
		Cumulative Target Values					
Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
PDO Indicator 1. Number of direct beneficiaries at project sites (Number, by gender and by tier)	59,287	94,047	147,651	216,014	298,909	357,589	357,589
Women	27,740	51,725	88,590	131,768	188,312	228,856	228,856
Home-based services	29,164	48,912	70,670	101,572	138,825	195,672	195,672
Community-based services	27,359	41,970	72,611	109,322	154,114	155,097	155,097
Institution-based services	2,764	3,165	4,370	5,120	5,970	6,820	6,820
PDO Indicator 2. Percentage of dedicated public outlays for elderly care spent on purchasing aged care services from non-public providers in urban areas at the project sites (Percentage, arithmetic average)	10	17	19	22	24	27	27

PDO Indicator 3 Share of aged care service providers who meet the requirements of construction and service standards at the project sites (Percentage)	34	55	68	82	91	98	98
PDO Indicator 4. Number of aged care managerial staff who received training certificates financed by the project (Number, by gender)	0	800	2,100	3,400	4,700	5,500	5,500
Women							
		Cumulative Target Values					
Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Intermediate Result Indicator 1. Number of modules developed and operating for the provincial information system (Number)	0	0	0	4	4	4	4
Intermediate Result Indicator 2. Number of users who utilize the provincial information system (number per year)	0	0	0	1,097,625	1,465,618	18,255,678	18,255,678
Intermediate Result Indicator 3. Number of aged care service standards developed at the provincial level and financed by the project (Number)	0	12	24	36	48	48	48
Intermediate Result Indicator 4. Number of aged care professionals participating in training activities (Number, by gender)	0	1, 840	3, 978	6, 115	8, 257	9, 795	9,795
Women							

Intermediate Result Indicator 5. Number of newly constructed or upgraded community service stations at the project sites (Number)	0	62	105	152	155	158	158
Intermediate Result Indicator 6. Number of households with family caregivers who received respite services at the project sites (Number, by gender of caregiver)	15	165	400	500	700	970	970
Women	6	66	200	250	360	466	466
Intermediate Result Indicator 7. Number of newly constructed or upgraded nursing care beds at the project sites (Number)	40	2,795	3,605	4,925	5,795	6,340	6,340
Intermediate Result Indicator 8. Occupancy rates of beds at the project sites (Percentage)	39	19	49	57	68	78	78
Urban Community stations	37	36	45	55	68	80	80
Urban welfare homes	50	0	70	75	80	80	80
Rural Welfare homes	30	40	60	65	70	75	75
Skilled nursing homes	0	0	20	33	55	78	78
Intermediate Result Indicator 9. Proportion of the elderly benefiting from the project who received functional ability or needs assessments (Percentage, by gender)	23	55	73	78	85	92	92
Women							
Intermediate Result Indicator 10. Satisfaction of consumers and their families with aged care services (Percentage, by gender)	n.a.	—	—	—	—	—	—
Women							

Intermediate Result Indicator 11. Weekly time use of family caregivers who provided aged care to their elderly recipients (hours per week, by gender and by category)	n.a.	—	—	—	—	—	—
Women							

Note: Intermediate Results Indicator 10 and 11 will be collected through special purpose household-based surveys. The baseline survey will be conducted at the start of the project, the second wave survey at the MTR, and the final wave by the end of the project.

Description of Indicators				
Project Development Objective Indicators				
Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
PDO Indicator 1. Number of direct beneficiaries at project sites (Number, (Number, by gender and by tier)	Direct beneficiaries are the targeted elderly with limitations in their functional abilities. In addition, *Sanwu*, *Wubao,* and *Dibao* elderly, empty nesters and oldest elderly are also included in the direct target beneficiary group. The sub-indicators would be set up by each tier of aged care services (home care, community care, and institutional care) and by gender.	Yearly	Administrative data collected through project monitoring at the project sites	PMOs and PIUs
PDO Indicator 2. Percentage of dedicated public outlays for elderly spent on purchasing aged care services from nonpublic providers in urban areas at the project sites (Percentage, arithmetic average)	The numerator is public spending through purchasing aged care services from nonpublic providers in urban areas at the project cities; the denominator is the total public spending in delivering aged care services in urban areas at the project sites.	Yearly	Administrative data collected through project monitoring at the project sites	City DOCAs
PDO Indicator 3. Share of aged care service providers who meet the requirements of construction and service standards at the project sites (Percentage)	Aged care service providers include those providing home/community/institutional care services. The national and provincial construction and service standards will be defined in detail.	Yearly	Administrative data collected through project monitoring at the provincial level and at the project sites	DOCA and the PPMO

	The numerator is number of aged care service providers who meet the required construction and service standards and the denominator is the total aged care service providers at the project sites.			
PDO Indicator 4. Number of aged care managerial staff who received training certificates financed by the project (Number, by gender)	Aged care managerial staff include facility managers, and government officials in charge of elderly care. The sub-indicators would be set up by gender. Training includes short-/medium-term skills development activities related to aged care services that are financed by the project.	Yearly	Administrative data collected through project monitoring at the provincial level and at the project sites	PMOs and PIUs
Intermediate Results Indicators				
Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Intermediate Result Indicator 1. Number of modules developed and operating for the provincial information system (Number)	The provincial information system aims to develop seven functional modules to serve for data collection, management and decision-making, and information publicity from the concept of the overall design.	Yearly	Administrative data collected through project monitoring at the provincial level	PPMO
Intermediate Result Indicator 2. Number of users who utilize the provincial information system for the aged care business. (Number per year)	Users include government officials, service providers, operators, institutions, and clients.	Yearly	Administrative data through the provincial information system	PPMO
Intermediate Result Indicator 3. Number of aged care service standards developed at the provincial levels and financed by the project (Number)	The standards include those developed at the provincial level and financed by the project for home care, community care, and institutional care services.	Yearly	Administrative data collected through project monitoring at the provincial level	PPMO
Intermediate Result Indicator 4. Number of aged care professionals participating in training activities (Number)	Aged care professionals include caregivers, nurses, doctors, operators, service providers, managers, and government officials	Yearly	Administrative data collected through project monitoring at the provincial level and in the project sites	PMOs and PIUs

	Training includes short-/medium-term skills development activities related to aged care services and financed by the project			
Intermediate Result Indicator 5. Number of newly constructed/upgraded community service stations at the project sites (Number)	Newly constructed/upgraded community service stations are those financed by the project at the project sites.	Yearly	Administrative data collected through project monitoring at the project sites.	PMOs and PIUs
Intermediate Result Indicator 6. Number of family caregivers who received respite services at the project sites (Number, by gender of caregiver)	Number of caregivers who received respite services at the project sites. The sub-indicators would be set up by gender.	Yearly	Administrative data collected through project monitoring at the project sites.	PMOs and PIUs
Intermediate Result Indicator 7. Number of newly constructed or upgraded nursing care beds at the project sites (Number)	Newly constructed or upgraded nursing care beds are those financed by the project at community service stations, welfare homes, and nursing homes at the project sites.	Yearly	Administrative data collected through project monitoring at the project sites	PMOs and PIUs
Intermediate Result Indicator 8. Occupancy rates of beds at the project sites (Percentage)	The numerator is the sum of number of days each bed is occupied at community stations, welfare homes and nursing homes at the project sites. The denominator is the total number of beds times 365 days at community stations, welfare homes and nursing homes at the project sites. The sub-indicators could be set up by community service stations, rural and urban welfare homes, and nursing homes.	Yearly	Project data and administrative data at the project sites	PMOs and PIUs
Intermediate Result Indicator 9. Proportion of the elderly benefiting from the project who received functional ability/needs assessments (Percentage, by gender)	The numerator is the number of the elderly who received functional ability/needs assessments; the denominator is the total number of the elderly ages 60 and older. The sub-indicators would be set up by gender.	Yearly	Provincial administrative data from DOCA	DOCA and the PPMO

Intermediate Result Indicator 10. Satisfaction of consumers and their families at the project sites (Percentage, by gender)	Satisfaction of consumers and their families includes whether consumers have a choice of care and their satisfaction with the chosen modality. The sub-indicators would be set up by gender.	Three times	Household and individual surveys. A baseline survey will be conducted at the project start, the second wave survey at the MTR, and the final wave by the end of the project.	PMOs and PIUs
Intermediate Result Indicator 11. Weekly time use of family caregivers who provided aged care to their elderly recipients (hours per week, by gender and by category)	Weekly time use of family caregivers refers to actual hours of family caregivers who provided aged care to their elderly recipients. The sub-indicators would be disaggregated by the time use category and by gender.	Three times	Household and individual surveys. A baseline survey will be conducted at the project start, the second wave survey at the MTR, and the final wave by the end of the project.	PPMO, PMOs and World Bank task team

Annex 2: Detailed Project Description

CHINA: Anhui Aged Care System Demonstration Project

Component 1: Supporting the Development of Government Stewardship Capacity (Total Cost: US$10.45 million, IBRD financing US$10.40 million)

1. This component will (a) support development of a unified information system to facilitate both the development and management of the aged care service system, (b) design and pilot an assessment of functional ability and needs to improve the effectiveness and quality of care services, (c) establish a set of quality standards for aged care services, and (d) support training of a professional workforce (managers and administrators) for aged care services. This set of activities to support government stewardship capacity is a strong and innovative feature of this project. The 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System points out that there are major weaknesses in the area of regulations and policies concerning elderly care and that the approach should be more systematic, consistent, targeted, and implementable. The choice of areas to focus on in developing stewardship capacity is illuminated in the World Bank 2018 report "Options for Aged Care; Building an Efficient and Sustainable Aged Care System in China."

Subcomponent 1.1. Unified Information System

2. A unified information system will be designed in response to the needs of stakeholders and users, who will participate in the design process and provide their perspective at every critical stage, including design, development, testing, and assessment. The intended users of this system are (a) DOCA and other government agencies that are responsible for policy making and stewardship of the industry; (b) members of the public who are seeking meaningful and accurate information on available aged care services, their prices, and quality; and (c) current and potential providers who require information about aged care demand, government policies, standards, and subsidies. To serve these three types of users, the system will comprise three subsystems (a) a data collection system, which would collect essential data such as basic population information, needs assessment data, service providers' data, and information about government policies and standards; (b) a service management system, which would support DOCA and other government agencies in supervision, administration, and M&E (services provided, their price, cost, mix of services, client mix, customer satisfaction, complaints, and redress); and (c) an informational public interface system, which would contain information relevant for the public (to help choose services and service providers) and relevant to the service providers (to assist with business planning and development).

3. The system will establish two-way data sharing arrangements with other information systems (for example, the National Elderly Care Information System, municipal elderly care MIS, and provider MIS) to ensure data integrity and effective supervision. Its development will proceed in two steps; first, the overall architecture will be developed reflecting the business needs and processes, and second, the actual database, application systems, platforms and network interface will be developed within this overall architecture, built with hardware, software, and other equipment. The investment activities will include (a) establishment of the provincial aged care data center, (b) development of comprehensive application platforms (including platforms for data

collection, service management, information dissemination and service delivery), (c) design of data, interface and exchange standards to support the development of a unified provincial information system, and (d) migration of the current management and information system to the new platform. The sustainability of system operation and maintenance will be ensured by Anhui DOCA, whose administrative budget will cover operating expenditures. The loan allocation for this subcomponent is US$8.45 million.

Subcomponent 1.2. Functional Ability and Needs Assessment

4. A comprehensive needs assessment system is fundamental for effectively determining the eligibility for public subsidies and priority access to aged care services, for carefully planning case management for delivery of customized care services, and for timely monitoring and managing the quality of aged care services. The current policy links the amount of government subsidy for elderly care with the level of deterioration in the functional ability of the recipient, but, in practice, the subsidy differential is very small and certification is somewhat subjective. Accordingly, the activities under this component will include the following: (a) developing the provincial level needs assessment standards and corresponding instruments based on the national elderly ability evaluation standard issued by the Ministry of Civil Affairs,[10] while incorporating standards that are informed by both international experiences (InterRAI in the United States, ACFI in Australia and Easy Care in the United Kingdom) and domestic pilots (local practices in Shanghai and Beijing); (b) piloting this new assessment system in selected municipalities of Anhui (including Anqing, Lu'An and Suzhou); and (c) providing training to professionals in third-party institutions to develop capacity for implementing the comprehensive needs assessment system.

5. After piloting the system, the results will be evaluated and the design adjusted, before scaling it up province-wide. These activities will be financed by a loan allocation of US$0.62 million.

Subcomponent 1.3. Aged Care Service Standards

6. The standards for residential, community-based, and home-based aged care services will be developed, piloted, and implemented to improve the quality of service provision and management. The quality of care is typically measured using structure, process, and outcome indicators, and a combination of process and outcome criteria is frequently employed. Countries with developed, publicly funded elderly care systems rely heavily on inspection and regulation of long-term care providers to ensure quality and these systems emphasize inspection more than enforcement. Accordingly, under this subcomponent, the envisaged project activities will include the following: (a) As an immediate and short-term measure, a subset of the existing provincial standards will be tested right after the project implementation starts, before being published as guidelines to local governments and service providers; (b) At the same time, the Government will start developing a provincial standards system framework that will inform the establishment of a comprehensive standards system in the long run; (c) The Government will develop a number of key provincial standards that will be coordinated with the national standards and the industrial standards. These will be developed for all segments of service provision (residential care,

[10] *Guiding Opinions on Promoting the Standardization of Senior Care Services*, co-issued by the Ministry of Civil Affairs, the Ministry of Commerce, and several other government agencies in January 2014.

community-based care, and home-based care) and the priority provincial standards for development will be decided based on the provincial requirements for quality assurance, monitoring, and management; and (d) In addition, the Government will continue developing tools and standards for public-private partnerships through commissioning, contracting, and purchasing, and provide guidance to Suzhou prefecture city for them to develop a detailed business plan in managing the public-private partnerships for rural welfare homes.

7. As aged care services are increasingly being provided by private entities, many of which are contracted by local governments, the Government accords high importance to developing effective and accountable arrangements for managing commissioner-provider relations. These TA activities will be financed by a loan allocation of US$0.35 million.

Subcomponent 1.4. Professional Managerial Training and Capacity Building

8. Building and managing a professional workforce is one of the priority areas for policy interventions and the government in Anhui has developed a strategic plan to provide training for the workforce in the aged care sector. While the government established dedicated resources to implement this plan for the frontline care workers, there is need to focus on strengthening the knowledge base and skills of the managerial staff. Accordingly, activities in this component will focus on the following: (a) upskilling of 500 aged care facility managers each year for four years in both the public and private institutions; and (b) training of 300 government officials in charge of the aged care sector each year for five years to upgrade their knowledge and administrative skills in managing the aged care sector, including managing commissioner-provider relations in the context of government purchasing of private services.

9. Because aged care services are increasingly provided by private entities contracted by local governments, effective and accountable arrangements are required to manage commissioner-provider relations, which requires new skills and understanding from both private providers and public mangers. They would learn about the good principles for the management of government purchase of private provision of services. The activities of this subcomponent will be implemented both at the provincial level and at selected project sites. This subcomponent will receive an allocation of US$0.98 million.

Component 2: Strengthening Community-based and Home-based Care Services (Total Cost: US$42.64 million, IBRD financing: US$40.87 million)

10. This component will strengthen the delivery of community-based and home-based care services in two project cities, Anqing and Lu'An. It will support the establishment of community-based service stations and provide home-based services through government purchasing. The project will finance civil works, goods, consulting services and capacity-building activities. The loan will also be used to directly finance payments to providers of community-based and home-based care services

Subcomponent 2.1. Upgrading Community-based Service Stations System

11. This subcomponent will support the establishment of community-based care stations in Anqing and Lu'An. IBRD financing for this sub-component is US$17.96 million.

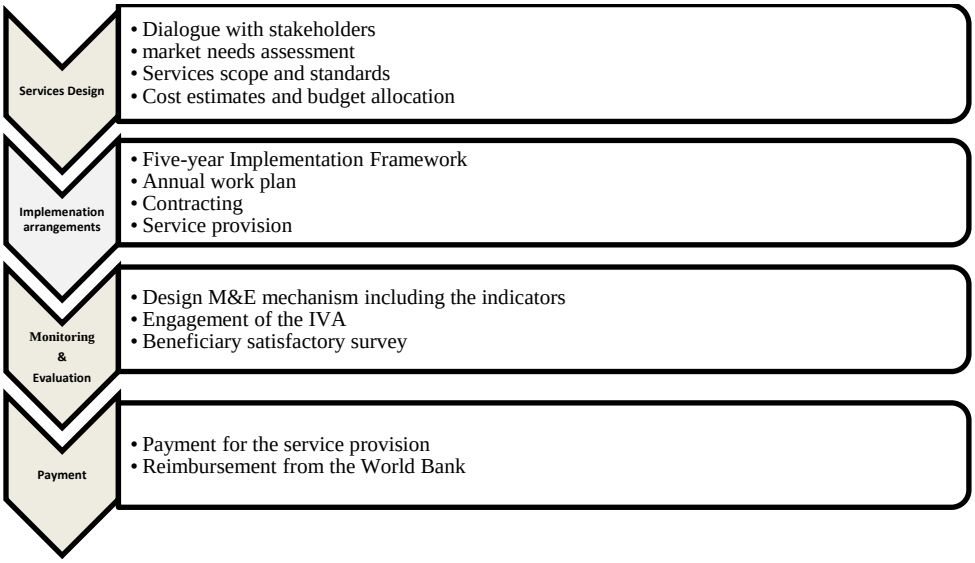
12. These facilities will be established in locations that are convenient for the elderly to access and will collaborate with other community service centers, in particular, community health clinics. Each service station will provide basic daycare and facility care (around 500 beds in each municipality) and at the same time extend services to home-based care. The station will be able to provide simple health care services, basic rehabilitation exercises, and psychological counseling to elderly people receiving daycare and home-based services. The community-based service stations will be designed and built according to relevant national standards and building codes for aged care facilities. These stations will have universal access features and will be equipped with the necessary firefighting tools. Each station will have multiple function rooms, a daycare center, a recreational room, a library and study room, a fitness and rehabilitation room, ancillary areas, toilets, and others. The interior design will cater to the characteristics of elderly people.

13. In Anqing Municipality, the locations for 114 service stations have been selected already, and in Lu'An Municipality locations for 19 facilities have been identified. The civil works would mainly involve upgrades and renovations of existing facilities and would not involve land acquisition. New service stations and, potentially, changes in the identified locations are envisaged for the duration of the implementation, but new locations will be in places with existing facilities and/or will not require land acquisition or involuntary resettlement. Because the demand and the conditions of the existing facilities vary from one site to another, Anqing and Lu'An will group the proposed community-based services stations by locality and procure the civil works through a few packages. The goods will be the essential furniture and equipment for the stations operations and management, including beds, chairs, tables, cookware, fitness appliances, and other equipment. The details will be reflected in the Procurement Plan.

Subcomponent 2.2. Purchasing of Community-based and Home-based Care Services

14. This subcomponent (IBRD financing: US$22.91 million) aims to improve the efficiency of the use of government subsidies and the effectiveness of basic aged-care service provision. It will support the provision of community-based and home-based aged care services to the elderly in need by engaging specialized service providers through performance-based contracting that ties the disbursement to measurable service delivery that meets predetermined performance standards. This approach will develop a framework that defines the roles and responsibilities of all parties involved and standardized purchase procedures throughout the cycle. The implementation details will be included in the Guidelines for Purchase of Basic Aged-Care Services and updated whenever needed during the implementation period. Figure 2.1 illustrates the key elements of government purchase of services.

Figure 2.1. Key Elements of Government Purchase of Basic Aged Care Services



15. **Defining services.** For the initial phase of implementation, Anqing and Lu'An have identified the target groups and basket of basic services, including needs assessments for frail and disabled elderly, meal services, visits to empty nester elderly, respite services for familial caregivers, and personal care for the elderly whose income is low. The target groups and basket of basic services will be further examined in the course of project implementation, guided by the pilots of the needs assessment and the pilot experience evaluation. Anqing and Lu'An will continue analyzing the service needs of the general elderly in the administrative area and prioritize the categories of services. The scope of services, technical standards, and delivery procedures will be defined in sufficient detail and used in the contracts.

16. **Cost estimates and budget planning.** Anqing and Lu'An have proposed their respective budget envelopes for government purchase of basic services to be financed by the IBRD loan and the counterpart funds for the entire project implementation period. They will determine the unit costs based on the market prices of each service item and will also propose the quantity, quality, and outcomes of basic aged care services to be purchased annually. An annual work plan with budget estimates will be prepared, including the operating cost and expenses on the activities critical to achieving the expected outcome such as the workshop with the stakeholders, outreach campaign to potential beneficiaries, and activities to maximize the interested service providers.

17. **Implementation arrangements.** The Civil Affairs Bureaus of Anqing and Lu'An, as purchasers, will take the overall responsibility for purchasing to ensure that the beneficiaries receive quality services. An annual work plan will be prepared to define the basic services to be purchased, time schedules, and budget estimates for each year as well as necessary TA, outreach campaign and M&E activities that require the review and approval of the World Bank. The PMOs of the two municipalities will be responsible for the implementation of the annual work plan. The PMO will carry out the procurement, contract management, progress monitoring, hiring of consultant services for evaluation, and payment for services delivered based on verification reports,

and will process reimbursement requests from the World Bank through the PPMO and the provincial DOF.

18. **Contracting service providers.** The service providers will be selected through open competition. The PMOs of Anqing and Lu'An will prepare bidding documents, develop the selection method and evaluation criteria, and draft contracts. The procurement notice will be published in public procurement website and the evaluation committee would consist of one or more aged care experts. For the services that unit costs are determined, Anqing and Lu'An Civil Affairs Bureaus will establish a pool of qualified service providers based on their qualifications. All interested providers will be made aware that the selection criteria will include skills, experience in delivering services related to aged care, and having a track record of good reputation of providing service, financial capacity to pre-finance service delivery, clean audits, and so on. Anqing and Lu'An Civil Affairs Bureau will enter into a service agreement with each selected service provider. Such an agreement will include the service(s) to be purchased and will specify standards and measurable indicators, the service period, unit costs, the ceiling of contract amount, and payment arrangements. It will also detail the requirements for supervision, performance monitoring, verification of the quality and quantity of the services, a dispute resolution mechanism, and other requirements. The output-based disbursement for selected aged-care services will be adopted to pay the service providers based on the pre-agreed unit costs and the quantity of services provision to the targeted beneficiaries that meet the defined service standards. Details will be developed in the 'Guidelines for Purchase of Basic Aged-Care Service'.

19. **M&E.** The project will help improve the M&E mechanism for government purchase of basic aged care services. The first part of M&E is to monitor the progress of the indicators defined, for example, the number of elderly who have received services, how many are female, how many are Wubao or Sanwu, the percentage of all empty nesters in a certain community who have received basic care services, and so on. While most of the data can be collected by the service providers, the civil affairs authority can also validate the data through an IVA or through sample post review. The second part is to design and carry out a beneficiary satisfaction survey to understand the beneficiaries' feedback on the services received and recommendations for improvement. The third part is to design and conduct an evaluation of the efficiency and effectiveness of government purchase of aged care services, which can include the service package design, use of government subsidies, contracting and contract management, and payment mechanisms. This part also includes disseminating the results. The data collected and evaluation results will be analyzed and used for improvement of government purchase of basic services. Service providers failing to meet the specified service standards would be disqualified from providing additional services for this project.

20. **IVA.** Under the project, Anqing and Lu'An Civil Affairs Bureau will engage a third-party IVA respectively. The IVA is a key mechanism to enhance the performance of service providers and mitigate the risk of misuse of funds. The IVA will: (a) verify whether the services were physically delivered to the targeted beneficiaries and whether the service providers have achieved pre-agreed standards of service; and (b) validate the service provider's reimbursement request and, if so, recommend to the local Civil Affairs Bureaus to honor payment. The verification protocol will be developed by the IVA, with technical inputs from the World Bank, and approved by the local Civil Affairs Bureaus.

21. **Payment to service providers.** The service providers will be paid by the local Civil Affairs Bureaus upon verification of the quantity of the services delivered that meet the standards as defined in the service agreement. The service provider is required to conduct detailed accounting in accordance with the domestic regulations on financing accounting. The service provider is also required to keep all the documents, such as service contracts with the Civil Affairs Bureau and evidence on physical service delivery to the individual beneficiary.

22. **Reimbursement from the World Bank.** The PMOs of Anqing and Lu'An will retain all the original documents, such as the contracts, the invoices, the verification reports, and documentation of payment to the service providers. As authorized by its Civil Affairs Bureau, the municipal PMO will submit reimbursement requests with supporting documents to the PPMO. The withdrawal application for reimbursement will be submitted to the World Bank by the provincial DOF. The procedures and the required documents are indicated in the 'Guidelines for Purchase of Basic Aged-Care Service'.

Component 3: Strengthening the Delivery and Management of Nursing Care (Total Cost: US$136.90 million, IBRD Financing: US$58.88 million)

23. In urban areas, intensive skilled nursing has been identified as the segment with the most acute unmet current effective demand. In rural areas, welfare facilities provide sheltered accommodation to the elderly and needy rural poor, but these facilities are typically dilapidated and provide little nursing care. Accordingly, this component will: (a) strengthen the delivery and management of urban skilled nursing facilities in two project municipalities; (b) increase the capacity of government-run urban welfare homes in one project city; and (c) strengthen the delivery and management capacity of government-run rural welfare homes, including developing options for public private partnership in one district and four counties of one project municipality.

Subcomponent 3.1. Urban Skilled Nursing Facilities

24. The construction of skilled nursing facilities will take place in Lu'An and Anqing Municipalities. The design and location of the facilities conform to good international and local practice of concentrating facilities in places with high population density and focusing on elderly people with significant limitations of their functional ability. In Lu'An and Anqing, nursing facilities will be attached to public hospitals. In Lu'An (a 500-bed facility), the nursing facility will be attached to a tertiary traditional Chinese medicine (TCM) hospital; in Anqing (a 1,000-bed facility) the nursing facility will be attached to the First People's Hospital and will have a hospice ward (in addition to other services). IBRD financing for this subcomponent is US$35.76 million.

Subcomponent 3.2. Urban Welfare Homes

25. This subcomponent will enhance the provision of skilled and semiskilled nursing care and long-term care services in welfare homes. The clients of these services are both the indigent poor elderly (Sanwu, Dibao, low-income empty nesters), the oldest elderly and self-paying customers who have ADL limitations, or IADL limitations. The two project sites are located in Ningguo (county-level city) and Xuanzhou District, which are under the administration of Xuancheng City. In Ningguo, about 260 beds would be added in the existing welfare home, while in Xuanzhou the project will relocate the existing residential welfare home to a new location and increase its

capacity to 400 beds. Both welfare homes will be used as regional platforms for delivering training and outreach. IBRD financing for this component is US$13.36 million, with around US$6.7 million allocated for each site.

Subcomponent 3.3. Rural Welfare Homes

26. Rural welfare facilities provide sheltered accommodation to the elderly and needy rural poor (Wubao seniors). This is an important function, especially given the high outmigration from Anhui. These facilities are typically operated as group homes and provide little nursing care to elderly people who need it. The project activities will focus on building, upgrading, and equipping these facilities. As is the case with urban welfare homes, these facilities will accept self-paying customers, but the Government will ensure the priority admittance of Wubao seniors and will continue providing for their cost. The Government plans to increase the nursing content of services provided in rural welfare homes and use these facilities as resource centers for nearby areas. At the same time, the Government is also considering inviting private sector operators into this market segment, and will formulate a business plan on how to manage the development of the public-private partnership, linked to the project activities described in Component 1, Subcomponent 1.3. A total of 35 facilities located in one district and four counties of Suzhou Municipality will be upgraded following the relevant national and provincial construction standards, using an IBRD loan of US$9.77 million.

Component 4: Project Management, and Monitoring, and Evaluation (Total Cost: US$2.68 million, all IBRD Financing)

27. This component will: (a) support project management and build capacity in general management and planning to ensure an effective and efficient implementation in compliance with the World Bank's operations policies and procedures as well as with domestic rules; (b) provide technical guidance through a project expert panel (PEP) to support project implementation; and (c) support the monitoring of the implementation of project activities and the achievements of the intended results. The project activities will include consulting services; non-consultant services; training, workshops, and study tours; and incremental operating costs.

Subcomponent 4.1. Project Management and Capacity Building

28. This subcomponent will support the activities of the project LG, the operation of the PMOs at the provincial level hosted by DOCA and the local PMOs hosted by the municipal Civil Affairs Bureaus, and the functions of the technical PEP at the provincial level. The project will hire additional project management staff to fill the gap of both the staff and skill shortage, for example, experienced procurement consultants and financial accountants. The EP would be composed of experienced experts, researchers, and practitioners with various expertise and knowledge, and will provide technical advice and guidance to the project activities at both the provincial and local levels. The project will recruit the experts as defined in the terms of references of the PEP acceptable to the World Bank on a full-time or part-time basis. Capacity building under this component will focus on general project management, fiduciary management, safeguards, and monitoring for project managers and operational staff at the PMOs and PIUs.

Subcomponent 4.2. Monitoring and Evaluation

29. This subcomponent will help develop an M&E system for the project interventions. It will support the development of an indicator system under the Results Framework and a mechanism for project monitoring, including collecting administrative and survey data and compiling case studies on project innovations. Each PMO will set up an M&E team, with TA from an M&E expert, and collect data following the M&E manual and report annual progress of project implementation. Necessary training on M&E will be provided to the relevant staff. It will also support the dissemination of the experience and lessons learned from the key project interventions and results. Such activities will be determined in the annual work plan based on the pace of the implementation of the project.

Annex 3: Implementation Arrangements

CHINA: Anhui Aged Care System Demonstration Project

Project Institutional and Implementation Arrangements

Overall Institutional Arrangements

1. The project will be implemented in Anhui Province at the provincial, city, and county levels. The DOCA of Anhui Province will take the overall responsibility for coordinating the project implementation and carrying out the provincially managed activities. The project will establish an LG at DOCA to provide policy guidance and overall direction for the project. The PEP will be organized by the PPMO to provide TA to both provincial and local levels. The day-to-day project implementation and management is the responsibility of the PMOs and PIUs at all levels.

Implementation Arrangements

Project LG

2. DOCA has established a Leading Group (LG) headed by a Deputy Director General and include the heads of the relevant divisions/units within DOCA (Social Welfare and Charity, General Office, Finance and Planning, and others), heads of the relevant divisions of Ageing Commission Office, and the Directors of Civil Affairs Bureaus of all the project municipalities. The LG will provide overall policy guidance and the direction of the project, take the responsibility for the coordination with other departments/agencies at the provincial level as well as review the progress of the project implementation and advise on the dissemination of the project results.

PMO

3. The Provincial PMO (PPMO) housed in the DOCA has representatives of all relevant divisions/units of DOCA, including Social Welfare and Charity, Finance and Planning, Information Center, Social Assistance, and others. A Deputy Director General of DOCA is assigned as the Project Director overseeing the project implementation and coordination and the director of the Division of Social Welfare and Charity is assigned as the Deputy Project Director in charge of day-to-day operation and communication with internal and external partners. The PPMO is led by the Project Director, a Deputy Director General of DOCA, overseeing the project implementation, and a Deputy Project Director, the Director of the Division of Social Welfare and Charity, in charge of day-to-day operations. The PPMO will ensure compliance with the requirements of World Bank-financed projects, including FM, disbursement, auditing, procurement, safeguards, and M&E. The PPMO will: (a) coordinate with the municipality and city PMOs and provide project management support, including training as needed; (b) compile the annual project work plan and semiannual progress report; (c) set up an M&E mechanism to update the values of monitoring indicators and conduct thematic evaluation; (d) coordinate with the PEP that provides timely technical advice to the project implementation; and (e) facilitate communication among the LG, the World Bank, and the project municipalities. It will be responsible for the implementation of the provincial activities. While the PPMO also takes the overall responsibility for the implementation of the provincial level activities, a sub-unit,

consisting of representatives from the relevant divisions/units to support the implementation of the corresponding subcomponent of Component 1 with clear roles and responsibilities defined, will be formed.

4. The PMOs at the municipality or city/district level have been set up at the Civil Affairs Bureau in Anqing Municipality, Lu'An Municipality, Suzhou Municipality, Ningguo County-level City and Xuanzhou District. The PMOs will follow a structure similar to that of the PPMO and will be responsible for implementing the project activities at their corresponding level. The local PMOs will be responsible for: (a) the FM, disbursement, auditing, procurement, safeguards, and M&E during the implementation; (b) making an annual work plan and for semiannual reporting; and (c) coordinating with the LG, PPMO, PEP, as well as the PIUs. All PMOs will be fully staffed throughout project implementation with a Project Director, Deputy Director, and the designated officers in charge of FM, procurement, M&E, as well as general management and coordination.

PIU

5. The PIUs are the frontline implementers and owners of the project activities. They will work under their parent PMOs to implement the project activities. The PIUs will be responsible for day-to-day project FM work, including project accounting and financial reporting. They will support PMOs to carry out procurement activities while some of them play major role in procurement. Table 3.1 in presents a full list of the PIUs and their correspondence to the parent PMOs. Several PMOs established more than one PIU.

PEP

6. The project PEP will be established at the provincial level to serve the project as a technical advisory body. The PEP will consist of leading experts within the province and nationwide in key areas of project intervention such as functional ability assessment, quality of services, service provision, information management, civil engineering, M&E, capacity building, and other areas. The PEP will advise on the project contents, analyze the issues and recommend options, and comment on the TA designed under the project.

Costs of Project Management and Technical Support

7. The project funds will be allocated for the operating costs for the LG, PMO, and PEP, such as conferences and workshops, travel for field visits, office supplies, printing, and so on. Compensation of non-civil servants can be covered by the funds as well.

Figure 3.1. Project Institutional and Implementation Arrangements Chart

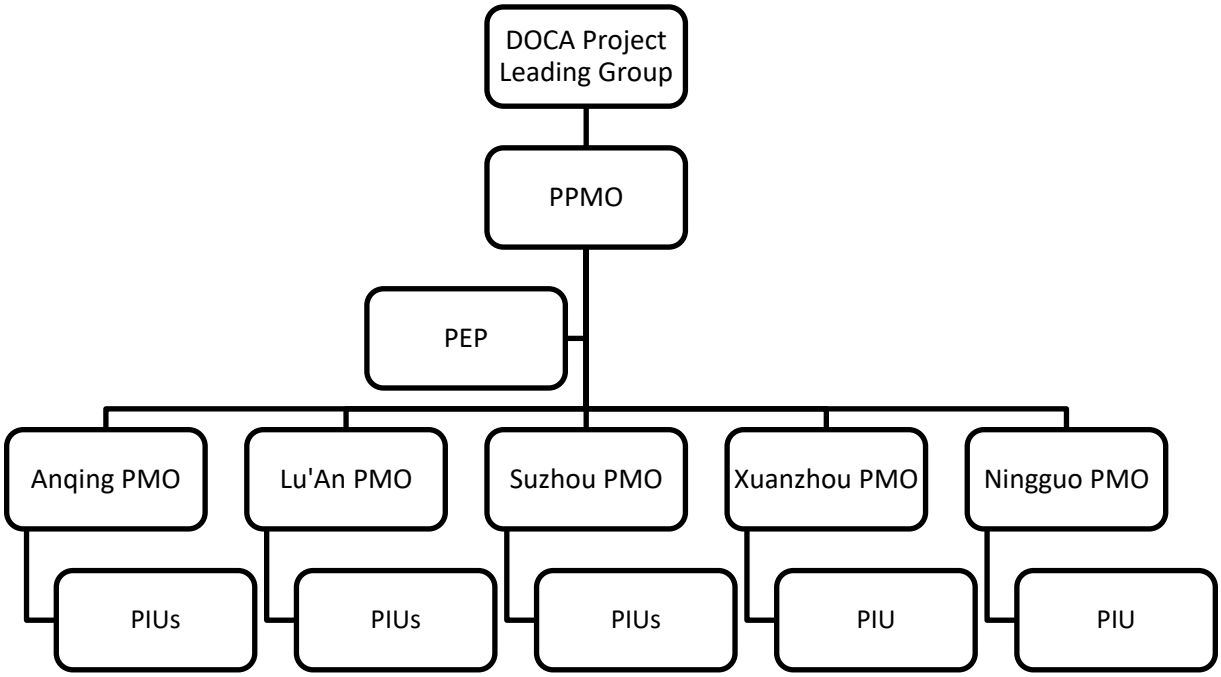


Table 3.1. List of PMOs and PIUs

	PMOs	PIUs
1	Anhui Provincial DOCA PPMO	• Anhui Provincial DOCA
2	Anqing Municipality Civil Affairs Bureau PMO	• Anqing Municipality Civil Affairs Bureau • Anqing Renmin Hospital
3	Lu'An Municipality Civil Affairs Bureau PMO	• Lu'An Municipality Civil Affairs Bureau Lu'An Chinese Medicine Hospital
4	Suzhou Municipality Civil Affairs Bureau PMO	• Suzhou Municipality Civil Affairs Bureau • Yongqiao District Civil Affairs Bureau • Lingbi County Civil Affairs Bureau • Dangshan County Civil Affairs Bureau • Xiaoxian County Civil Affairs Bureau • Sixian County Civil Affairs Bureau
5	Xuanzhou District Civil Affairs Bureau PMO of Xuancheng Municipality	• Xuancheng Municipality Welfare Home
6	Ningguo City Civil Affairs Bureau PMO of Xuancheng Municipality	• Ningguo City Welfare Home

8. **OM.** The project OM details procedures for implementation of the project activities, monitoring of compliance with both the World Bank operations policies and procedures and domestic regulations and rules, and reporting requirements. It specifies implementation steps for procurement, FM, disbursement and M&E. The OM should be reviewed and acceptable to the World Bank. The OM will be formally endorsed by the provincial DOCA and updated periodically by the PMOs in consultation with the provincial DOCA. Any revision of the OM would also be subject to review and approval by the World Bank.

9. **The Guidelines for Purchase of Basic Aged-Care Services**. The specific guidelines will be developed, in a manner satisfactory to the World Bank, to set forth the definitions, pricing, eligibility criteria, as well as the procedures for contracting eligible service providers, the disbursement, procurement, and financial management for the activities under Subcomponent 2.2. The guidelines may be revised in the course of the project implementation with the prior written agreement of the World Bank.

Financial Management, Disbursements, and Procurement

10. The FM capacity assessments were conducted for the provincial, municipal and district PMOs and PIUs in accordance with OP/BP 10.00 and the Financial Management Practice Manual. The assessment identified that the principal FM risk is the lack of experience of the financial staff of all the PMOs and the PIUs in managing the World Bank-financed operations, which, in turn, could lead to misuse or inefficient use of project funds. Mitigation measures to address this risk are as follows: (a) modification and distribution of an FMM to standardize project FM coordination and reporting procedures; (b) provision of FM technical training and knowledge sharing workshops to be arranged by the World Bank and Anhui provincial DOF; and (c) outsourcing qualified consultants to strengthen FM guidance and supervision for the PPMO and the project companies as needed. The risk of delayed delivery of counterpart funds will be mitigated by preparing a realistic financing plan by local governments and considering some alternative measures, if the flow of funds from the local governments are insufficient. The World Bank team will provide close monitoring during the project implementation. Overall, the control FM risk is assessed as Moderate, after implementing these measures.

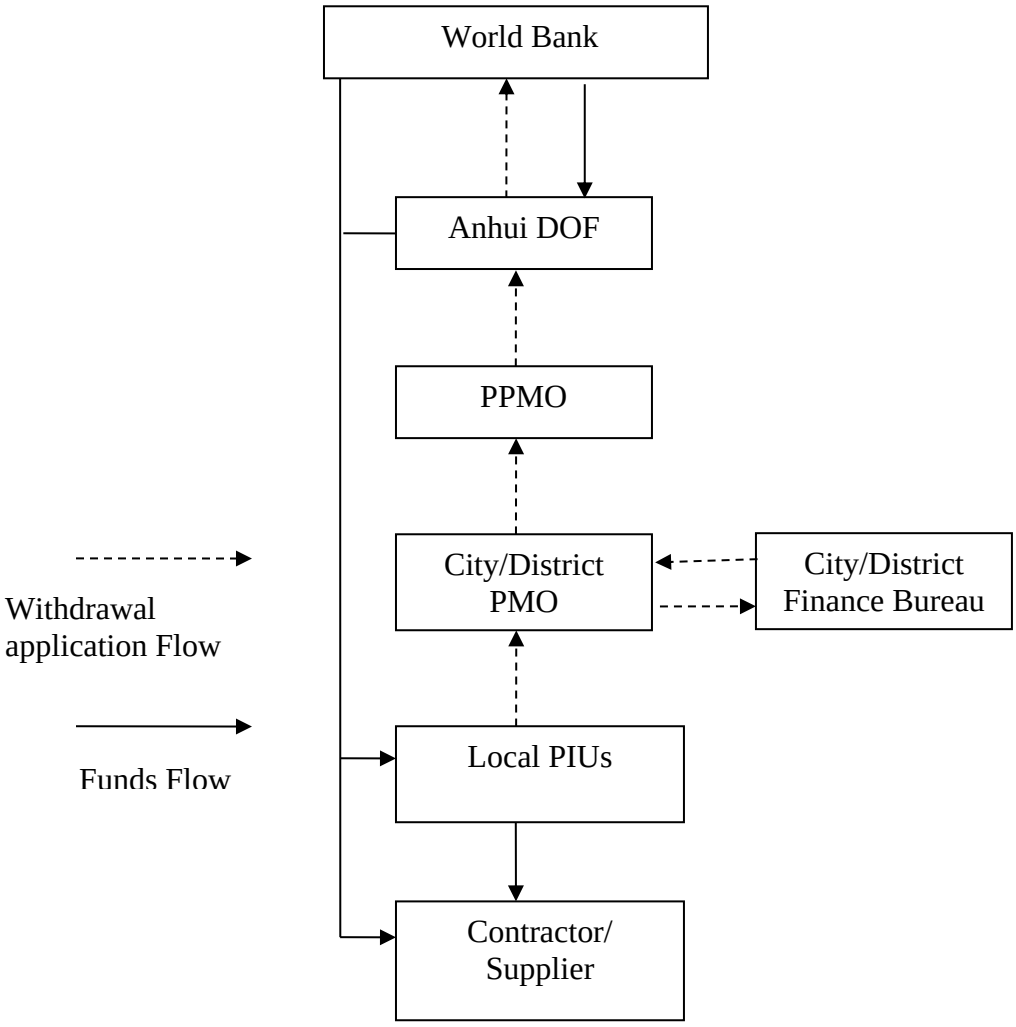
11. Funding sources for the project include the World Bank loan and the counterpart funds. The World Bank loan agreement will be signed between the World Bank and the Ministry of Finance (MOF). The MOF and the Anhui Provincial Government will enter into an on-lending agreement. The Anhui provincial government will on-lend the funds to municipal governments or, through the municipal government, to district and county governments. In cases of the Lu'An and Anqing hospitals, the World Bank loan will be on-lent to these implementing units through municipal governments.

12. **Budgeting.** The new Budget Law and the Decree 85 issued by MOF, requires that the World Bank loan is included into the government budgeting system. The PIUs will prepare the annual project implementation plan, including the funding resources and budget for PMO review, commenting, documentation, and submission to the relevant finance bureaus to arrange counterpart funds in the government's budget. The Lu'An and Anqing hospitals will mobilize counterpart funds from their own sources. The counterpart funds for other project components are committed by the local governments and will be reviewed and approved by the local People's Congresses and included in respective sectoral budgets. A realistic financing plan prepared by PIUs and relevant finance bureaus will enable the World Bank and government entities to supervise timely delivery of these committed funds. Budget variance analysis will be conducted semiannually by the PIUs and significant variances away from the plan that may need corrective actions will be reported to the PMOs.

13. **Funds flow.** A DA will be opened and maintained at the provincial DOF. Supporting documents required for payments from the DA or the World Bank loan account will be prepared

and submitted by the PIUs to their respective PMOs and then to the municipal or district finance bureaus for review. Upon successful review, these documents will be sent to the PPMO and finally to the provincial DOF for further review and payment processing. The provincial DOF, from the DA, reimburses the funds to the PIUs for the World Bank-financed portion paid by them first, or will pay the funds to contractors directly for payment of eligible expenditures. Finally, the withdrawal applications will be submitted by the provincial DOF to the World Bank for further disbursement. In addition, the direct payment and reimbursement from the World Bank to contractors and the PIUs are subject to the amount applied that meets the threshold specified in the disbursement letter. The finance bureaus should inform the PMOs on time after the payment so that that they can prepare accounting ledgers. The detailed disbursement procedures and funds flow arrangement are described in the project FMM.

Figure 3.2. Funds Flow



14. **Accounting and financial reporting.** The administration, accounting, and reporting of the project will be set up in accordance with Circular #13 'Accounting Regulations for World Bank Financed Projects', issued in January 2000 by the Ministry of Finance (MOF). The standard set of

project financial statements has been agreed between the MOF and the World Bank. The PIUs will be responsible for daily project FM work, including counterpart funds management and payments, project accounting, and financial reporting. The PPMO will consolidate the project financial statements prepared by each PIU and submitted through local PMOs. The Anqing and Lu'An PMOs will consolidate the Anqing and Lu'An project financial statements before sending them to the PPMO for final consolidation. The consolidated project interim financial report (IFR) should be furnished to the World Bank by the PPMO no later than 60 days after the end of each calendar semester (before August 31 and March 1 of the following period). The standard set of project financial statements has been agreed between the MOF and the World Bank, and includes the following:

- Balance sheet of the project
- Statement of sources and uses of fund by project components
- Statement of implementation of Loan Agreement
- Statement of DA
- Notes to the financial statements (required only for annual financial statements)

15. Computerized accounting systems, Yongyou and Jindie, have been adopted by the PIUs and a separate project accounting profile will be set up in the existing system according to the requirements of Circular #13. The accounting systems to be used for this project have been widely used and are working well in China, including under China's World Bank projects. A tailored chart of accounts to accommodate the project features have been elaborated in the FMM and agreed with the World Bank.

16. The task team will monitor the accounting process, including the adequacy of the FM system and staff training, especially during the initial stage, to ensure that complete and accurate financial information is provided on time.

17. **Internal control.** The internal control environment of the project is deemed adequate. All transaction processing will use government's institutions, processes and systems and they provide for segregation of duties, supervision, quality control review, reconciliations, and independent external audits. They appear to meet the needs of the project. Accounting policies, procedures, and regulations for World Bank projects were issued by the MOF, and the FMM aligns with the FM and disbursement requirements among various implementing agencies. In addition, the PPMO will work together with DOF and outsourcing consultants to provide guidance and supervision covering: (a) compliance of Circular #13 for project accounting and financial reporting; (b) examination of usage of the World Bank loan and the eligibility of project expenditures, as well as the efficiency of withdrawal procedures and funds flow; (c) contract management; and (d) budget preparation and variation analysis. The supervision results will be documented in a report and filed.

18. **Audit.** The Anhui Provincial Audit Office (AO) has been identified as the auditor for the project. One annual audit report will be issued by the Anhui Provincial AO and will be due to the World Bank six months after the end of each calendar year. The Anhui Provincial AO has extensive experience with auditing World Bank-financed operations. According to the World Bank's policy on Access to Information, the audit report for all investment lending operations for which the invitation to negotiate was issued on or after July 1, 2010, must be made publicly available on time and in a manner acceptable to the World Bank. The audit report will be made

publicly available on the website of the provincial auditor. Following the World Bank's formal receipt of the audited financial statements from the borrower, the World Bank will also make them available to the public in accordance with the World Bank's Policy on Access to Information.

Disbursements

19. Four disbursement methods are available for the project: advance, reimbursement, direct payment, and special commitment. The supporting documents required for World Bank disbursement under different disbursement methods will be documented in the Disbursement Letter issued by the World Bank.

20. One segregated DA in U.S. dollars will be opened at a commercial bank acceptable to the World Bank and will be managed by the Anhui provincial DOF. The ceiling of the DA will be determined and documented in the Disbursement Letter.

21. The World Bank loan would be disbursed against eligible expenditures (taxes inclusive) as in the table 3.2.

Table 3.2. Eligible Expenditures and Disbursement

Category	Amount of the Loan Allocated (expressed in USD)	Percentage of Expenditures to be financed (inclusive of taxes)
(1) Works, goods, consulting services, non-consulting services, Incremental Operating Costs, and Training and Workshops under the Project (except for Parts B.2(a) thereof)	91,919,000	100%
(2) Payment for the purchase of basic aged-care services under Part B.2(a) of the Project	20,910,000	100%
(3) Interest, Commitment Charge and other charges on the Loan accrued on or before the last Payment Date immediately preceding the Closing Date	4,876,000	Amount payable pursuant to Sections 2.04 and 2.05 of this Agreement, respectively, in accordance with Section 2.07 (c) of the General Conditions
(4) Interest Rate Cap or Interest Rate Collar premium	0	Amount due pursuant to Section 4.05 (c) of the General Conditions
(5) Front-end Fee	295,000	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07 (b) of the General Conditions
TOTAL AMOUNT	118,000,000	

22. Withdrawal up to an aggregate amount not exceeding US$23,600,000 of the IBRD loan amount may be made for eligible expenditures incurred on or after May 15, 2018 and prior to the signature date of the Loan Agreement.

23. **Disbursement mechanism for sub-financing of government purchase of the basic aged care services.** The World Bank loan will be disbursed in the form of subsidy to finance

government purchase of basic aged care services under Sub-component 2.2. Guidelines for Purchase of Basic Aged-Care Services to be prepared by the PPMO and agreed by the World Bank will lay out the selection procedures for service providers, the contracting requirements, eligible activities, methodology and mechanism for unit cost determination and adjustment, performance indicators, monitoring and verification, as well as financial reporting, the terms of payment and disbursement arrangements. The finalization of the Guidelines is defined as disbursement condition against the sub-financing category.

24. **Supervision plan.** The supervision approach for this project is based on its FM risk rating, which will be evaluated on a regular basis by the FM specialist in line with the FM sector board's FMM and in consultation with the relevant task team leader. The initial FM supervision will focus on: (a) the setup of project accounts; (b) project accounting and financial reporting compliance with Circular #13; and (c) disbursement processing.

Procurement

25. The overall procurement risk is considered Substantial.

26. **Capacity assessment.** The procurement capacity assessment identified the lack of experience with World Bank financed projects of the procurement staff in the PMOs and PIUs, possible adoption of customized domestic procurement practices, and unexperienced PIUs with nearly no exposure to procurement as the principal risks in the implementation of the procurement activities. The procurement function under the project will be assumed by multiple entities, including civil affairs bureau at municipal and county/district level as well as the municipal hospitals whose experience in project management and implementation varies materially. For example, the site survey at Lu'An TCM hospital showed that the PIU was adequately staffed and had previous procurement experience on domestic funded projects. This PIU was managing the ongoing domestic extension work for the hospital. In contrast, some civil affairs bureaus at the municipal level had little experience on procurement.

27. The mitigation measures agreed include: (a) an experienced procurement agent will be recruited by the PPMO; (b) continuous procurement training to be provided by the World Bank or training institution acceptable to the World Bank during project preparation and implementation to familiarize the staff with the World Bank's procurement procedures and raise awareness of the differences between the domestic practices and the World Bank's procurement policies and procedures; (c) a project management consultant to be hired by the PPMO to assist with design review and project management; (d) the PMO to finalize by negotiations a PMM acceptable to the World Bank and (e) Systematic Tracking of Executing Procurement (STEP) will be adopted, and the Procurement Plan in STEP will clearly illustrate the procurement activities assigned to each implementing agency.

28. **Applicable guidelines.** Procurement will be carried out in accordance with the following documents: 'Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers', dated January 2011, revised July 2014; 'Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers', dated January 2011, revised July 2014; and the provisions stipulated in the Loan Agreement. National Competitive Bidding (NCB) will be carried

out in accordance with the Law on Tendering and Bidding of the People's Republic of China, promulgated by Order of the President of the People's Republic of China on August 30, 1999, subject to the modifications stipulated in the Legal Agreement in order to ensure consistency with World Bank Procurement Guidelines.

29. **Procurement of works.** Works procured under this project will include construction of community-based care stations, construction of skilled nursing facilities, building/rehabilitation of rural welfare facilities and other civil works under Components 2 and 3. Procurement will be carried out using the World Bank's Standard Bidding Documents for all International Competitive Bidding (ICB) and National Model Bidding Documents agreed with or satisfactory to the World Bank for all NCB.

30. **Procurement of goods.** Goods procured under this project will include unified information system under Component 1, and furniture, cookware, fitness appliance and other equipment for community-based service stations and rural welfare homes, as well as equipment and instruments for nursing facilities under Component 2 and 3. Procurement will be carried out using the World Bank's Standard Bidding Documents for all ICB and National Model Bidding Documents agreed with or satisfactory to the World Bank for all NCB.

31. **Procurement of non-consulting services.** Non-Consulting Services procured under this project will include community-based and home-based care services under Component 2. Procurement will be carried out using the World Bank's Standard Bidding Documents for all ICB and National Model Bidding Documents agreed with or satisfactory to the World Bank for all NCB. In parallel, for a basket of services as identified in the Guidelines for Purchasing Aged-Care Services, procurement will be carried out using Performance-Based Procurement approach, which will be detailed in the Guidelines and approved by the Bank.

32. **Selection of consultants.** Consultants will be hired for activities under the project's Component 1 and 4. Selection will be conducted using the World Bank's Standard Request for Proposals for all Quality- and Cost-Based Selection (QCBS) and Quality-Based Selection (QBS). Universities and government research institutions may be selected in accordance with the provisions of 1.13(c) and 2.8 of the Consultant Guidelines.

33. **Training, workshops, and study tours.** Plans for training, workshops, and study tours will be developed by the PMO and included in the project's annual work plan for World Bank review. Expenditures incurred in accordance with approved plans for training and workshops will be the basis for reimbursement.

34. **Procurement Plan.** The Procurement Plan for the project will be agreed no later than loan negotiations. It will be made available on the project's website and on the World Bank's external website. The Procurement Plan will be updated annually or as required to reflect implementation needs and improvements in institutional capacity.

35. **Thresholds for prior-review and procurement methods.** The thresholds for procurement methods and prior review are indicated in table 3.3.

Table 3.3. Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value (US$)	Procurement Method	Prior Review Threshold (US$)
Goods and non-consulting services	≥10,000,000	ICB	All contracts ≥ 2,000,000
	<10,000,000	NCB	
	<100,000	Shopping	
	n.a.	DC	
Works/supply and installation of plant and equipment	≥40,000,000	ICB	All contract ≥ 10,000,000
	<40,000,000	NCB	
	<200,000	Shopping	
	n.a.	DC	
Consultants	≥ 300,000	QCBS, QBS, LCS or FBS	Firms: all contracts ≥ 1,000,000 Individuals: all contracts ≥ 300,000
	< 300,000	CQS, LCS or FBS	
	n.a.	SSS	
	n.a.	IC	

Note: ICB=International Competitive Bidding; NCB=National Competitive Bidding; DC = Direct Contracting; QCBS=Quality- and Cost-Based Selection; QBS=Quality- Based Selection; LCS=Least- Cost Selection; FBS=Selection under a Fixed Budget; CQS = Selection Based on the Consultants' Qualifications; SSS=Single-Source Selection; IC = Individual Consultant; n.a. = Not Applicable

36. **Advance contracting and retroactive financing.** Contracts expected to be signed in advance of loan signing would be identified in the agreed Procurement Plan for the project. Payments made under such contracts before the date of signing of the Loan Agreement will be eligible for retroactive financing within the limits specified in the Loan Agreement.

Environmental and Social (including safeguards)

Environmental Safeguards

37. The project is classified as a Category B project and triggers Environmental Assessment (OP 4.01).

38. **Environmental Assessment (OP 4.01).** The Project will bring positive social benefits to the local communities. It will not have any significant adverse environmental impacts given that the investments are mainly for the rehabilitation of the existing aged care facilities which are distributed across five cities/district (that is, Xuanzhou, Ningguo, Lu'An, Suzhou, and Anqing) in Anhui Province. The rehabilitation is to finance small-scale civil work and provision of equipment for the existing communities-based and home-based care facilities. The scale and size of the new constructions vary from community-based care facilities (hundreds of small buildings with several stories) to two nursing facilities (each with hundreds of beds). The potential principal adverse impacts are construction-related impacts, including dust, noise, wastewater, and short disturbance to local communities. Adverse impacts during operation include disposal of domestic waste and wastewater from these facilities and limited amount of medical waste from the nursing facilities (approximately 87 tons per year in total). Due diligence was conducted confirming that these waste and wastewater could be collected and disposed by the existing treatment facilities in accordance with relevant Chinese regulations.

39. An ESMP has been developed for the project as a stand-alone document. The ESMP summarizes key environmental impacts and risks, proposes site-specific mitigation measures for design, construction, and operation, including: (a) provision of collection and/treatment facilities

for wastewater and waste to be generated at the aged care facilities; (b) provision of firefighting facilities; (c) requirements for universal access design of the facilities to be rehabilitated and constructed under the Project; and (d) ECOPs for construction (see ESMP's annex 1). These measures for the construction phase will be entered into the bidding documents and the implementation of the mitigation measures will be supervised by relevant institutions. Specific mitigation measures during operation include: (a) disposal of waste and wastewater from these facilities; and (b) maintenance of safety facilities and emergency plan for accidents. The ESMP also includes a social impact management plan and specifies monitoring plan (for example monitoring requirements for waste, noise and so on), institutional arrangements (for example, roles and responsibilities for the PPMO, city PMOs, civil work contractors, on-site supervisors and so on), capacity building (for example, environmental training), and estimated budget of the ESMP implementation.

40. **ESMF.** Given that the Project may consist of some activities for which impacts cannot be determined until the activity details have been identified during project implementation, an ESMF has been prepared, setting out the guidelines and procedures to address the environmental impacts of the project activities.

41. **Public consultation and disclosure.** In accordance with OP 4.01, public consultations have been conducted during the EA process, including meetings with Project-affected people and local Environmental Protection Bureaus. The consultation on the EA safeguards document was undertaken from 2016 to July 2017. Feedback and concerns from the consultation have been addressed in the project design and in the EA documents. The draft EA documents were locally disclosed on the government website on July 21, 2017 with a notice published in a local newspaper on July 20, 2017. The final ESMP and ESMF were disclosed in-country on December 21, 2017 and on the World Bank's external website on December 27, 2017 and December 28, 2017 respectively.

42. **Climate co-benefits.** The project aims to achieve substantial energy efficiency in the establishment and operation of aged-care facilities under Component 2.1 and Component 3. Both the provincial government and local authorities are committed to an improved design that will adopt energy efficiency measures exceeding the regular standard requirements stated by the governments in accordance with Public Building Energy Efficiency Design Standards (GB50189-2015), Anhui Province Public Building Energy Efficiency Design Standards (DB34-1467-2011), and other national and local standards and specifications. The provincial government has requested that the technical standards and specifications regarding energy efficiency should be specified in the bidding documents during the project implementation.

43. Anhui DOCA has engaged a professional consulting firm to produce an Energy Saving Assessment Report which assesses the main energy saving measures in the project sites. The Report specified that the construction of new and the rehabilitation of existing facilities will adopt energy efficiency measures including (a) improved architecture design; (b) reduced heat transmission and infiltration; (c) utilization of energy saving appliances and equipment; (d) installation of LED lighting system: and (e) utilization of renewable energy equipment. Table 3.4 and Table 3.5 below illustrate that these measures lead to savings that exceed the national and provincial standards.

Table 3.4. Heat Transfer Coefficient of the Facilities

	Heat Transfer Coefficient under the project	Heat Transfer Coefficient Standards for Public Buildings
Roofing	0.38 W/㎡ k	≤0.70 W/㎡ k
External Wall	0.92 W/㎡ k	≤1.0 W/㎡ k
External window (Window-to-Wall ratio>0.7)	1.9 W/m^{2}k	≤2.5 W/㎡ k

Source: TYLIN International and Guoxin Tendering Group. 2018. Energy Saving Assessment Report for Anhui Aged Care Demonstration Project.

Table 3.5. Energy Efficient Equipment

Equipment	Specifications	Energy Efficiency Index under the project	Standard Energy Efficiency Index
A/C	Variable Frequency Air Conditioner	Energy efficiency ratio EER: 3.6	3.6
Lighting	T5/T8 Fluorescent lamp with electronic ballast, LED	≥85 lm/W	≥82 lm/W (level 1)
Elevator	Permanent magnet synchronous small machine room elevator	Motor Efficiency: 92%	≥89.4%
Variable Frequency water supply equipment	80LG-B40-20、65LG-B36-20, and etc.	Pump Efficiency: 80%	≥75%

Source: TYLIN International and Guoxin Tendering Group. 2018. Energy Saving Assessment Report for Anhui Aged Care Demonstration Project.

44. More specifically, according to the analysis of the Report, the installation of LED lighting system in the aged care facilities financed by the project will reduce power consumption by approximately 554,200 kWh annually, equivalent to 68 tce (standard coal equivalent). With regard to utilization of renewable energy in the aged care facilities, the solar water heating system will be utilized in the skilled nursing homes in Anqing and Lu'An under Subcomponent 3.1 and in the urban welfare homes in Ningguo and Xuanzhou under Subcomponent 3.2. The solar water heaters will save about 148,000 m^3 of natural gas annually, equivalent to 180 tce, but will consume electricity of 715,400 kWh (equivalent to 88 tce). The net annual energy saving brought about by the renewable energy is estimated at 92 tce. Overall the annual energy savings are estimated in tune of 160 tce, equivalent to approximately 442 tons of CO_2 emission reduction per year.

45. These energy efficiency improvement measures will lead to a reduction in energy consumption by floor area from 13.85 kgce/m^2·a to 13.24 kgce/m^2·a, representing a reduction of 4.4 percent. Table 3.6 shows the comparison of the key indicators before and after taking the energy efficiency measures based on the analysis in the energy saving assessment report.

Table 3.6. Energy Consumption of the Aged Care Facilities under the Project

	Before	After	Energy Efficiency Impact
Project Annual Comprehensive Energy Consumption	Annual Consumption	Annual Consumption	
Electricity (Unit: 1,000 kW·h)	26,974	27,136	161
Natural Gas (Unit: 1,000m^3)	249	102	-148
Water (Unit: 1,000 m^3)	434	434	0
Project Total Annual Comprehensive Energy Consumption (tce)	**3,655**	**3,495**	**-160**
Building Area (m^2)	263,938		
Energy consumption per unit of building area (kgce/ m^2·a)	**13.85**	**13.24**	**-0.61**

Source: TYLIN International and Guoxin Tendering Group. 2018. Energy Saving Assessment Report for Anhui Aged Care Demonstration Project.

Social Safeguards

46. The project is expected to bring significant social benefits, as it directly supports the frail and disabled elderly who are poor, have low income or lower-middle income, and it also creates jobs. A comprehensive SA conducted by the PPMO covered government agencies, medical establishments (surveying doctors, nurses and other health workers there), the elderly themselves (including younger elderly and older elderly), their formal and familial caregivers, and other members of communities and institutions where they live. The assessment covered urban and rural areas and inquired about accessibility and quality of existing services, as well as future needs. The assessment was based on deep local knowledge and understanding of aging and problems it brings in Anhui and followed a predetermined sampling frame. The SA confirmed that under the proposed design, it is the poor, low income, and low-middle-income groups who will benefit most from the envisaged interventions. The SA included public consultations and focus group discussions that confirmed the same.

47. **RAP.** The project triggers Involuntary Resettlement OP/BP 4.12. The RAP approached avoidance to land acquisition and resettlement relocations. Out of all project locations, only Xuancheng municipality will have land acquisition and resettlement and a legacy issue in Lu'An and Anqing linked hospitals which have an elderly care home within each of the two hospitals. The RAP described the adverse impacts related to land acquisition, structure demolition by an aged care center in Xuanzhou District of Xuancheng municipality. Consistent with World Bank Policy OP 4.12 on Involuntary Resettlement, the objectives of resettlement planning have been to ensure that incomes and living standards are improved (or at least restored) for all persons adversely affected by the project. Special care has been taken in resettlement planning to ensure that rehabilitation measures are sufficient arear where the land-taking from peri-urban are comparatively high.

48. According to the inventory of affected assets, census of the affected people, SA and consultations with local government agencies, Xuancheng municipality has land acquisition and resettlement which affected 29 households consisting of 94 persons. The RAP described the adverse impacts related to transferring a welfare home to a new location: (a) taking about 61.35

mu (4 hectares) of collective land, which affected 28 families consisting of 92 persons. Of the 61.35mu, 42.475 mu is the area of paddy fields, 1.83mu is the area of vegetable plots, 2.96mu is the area of woodland, 1.12 mu is the area of dry land, 8.04mu is the area of ponds, 0.925 mu is the area of homestead, 0.53 mu is the area of bamboo forests, 0.07 mu is the area of roads, 0.74 mu is the area of ditches, and 2.66 mu is the area of river channels; and (b) structure demolition conducted on 1,268.64 square meters of land, which affected 6 families consisting of 21 persons. Consistent with World Bank Policy OP 4.12 on Involuntary Resettlement, the objectives of the resettlement plan have been to ensure that incomes and living standards are improved (or at least restored) for all persons adversely affected by the Project. Special care has been taken in the resettlement plan to ensure that rehabilitation measures are sufficient where land expropriation from peri-urban areas is comparatively high. Based on the DDR report, there is a legacy issue of resettlement houses for the remaining 306 households in Lu'An and Anqing subprojects, actions such as M&E will be taken to ensure that the legacy issue is fully dissolved during the project implementation.

49. **RPF.** Relatively minor design changes are likely to continue until implementation. Typically, final designs result in marginal decreases in land acquisition and structural demolition, as well as changes in proportion among categories of affected land and structures. The numbers of the displaced families might be increased due to families broken down to small sizes in order to qualify for more benefits. An RPF was prepared in the event any additional land acquisition or resettlement emerge during project implementation, such as location of community-based aged-care service stations. As planned each service station will only need around 0.5 mu of space in existing building. In most cases, the building for such service station will be on existing public land. Just in case the RPF provides principles, procedures and legal framework to guide future involuntary resettlement.

50. **DDRs.** DDRs were conducted for two local funded hospitals in Anqing and Lu'An city which were identified as linkage projects because they both included an elderly nursing homes. The DDRs concluded that most compensation and resettlement had completed by December 2015. But in the Lu'An hospital case of land acquisition of 31.7 mu, there were remaining 111 households in transition for resettlement houses. The resettlement site called Lijing Yuan was generally completed by December 2017 and it is planned to be ready for living by July 2018. In Anqing hospital case of land acquisition of 282 mu, the land acquisition for the construction of this hospital started in 2014 and completed in 2016. The construction of the hospital is nearly finished. The Bank-financed project will support internal decoration of an aged-care home within the hospital. There are 195 affected households in transition for resettlement houses. The resettlement site called Nanshan Xiaoqu has completed the construction of buildings. This resettlement site has enough houses for all the resettled households and is planned to be ready for living in 2018. The displaced people have been receiving transitional living subsidies and are willing to wait for the resettlement sites which will be ready in 2018 according to the original plan. M&E will continue for the legacy issue until it is fully resolved.

51. The project authority will be responsible for the resettlement funds. All the resettlement fund will be paid by cash to the property owners. The project city land and resources bureaus will be responsible for guiding the resettlement activities and releasing land approval for both the project and the resettlement sites. An experienced national consulting team will be contracted to serve as the independent monitoring agency of the resettlement program. The project will be

monitored and the living standards of the project-affected people will be evaluated over the course of project implementation. The monitoring results will be regularly reported twice a year and, if needed, remedial actions will be devised.

52. **Information dissemination.** All displaced households and village communities have been identified through a census survey. The RAP and participatory report focusing on peoples' needs for this project and resettlement have been advertised on the municipal website. Information about the project and resettlement policy is available on Xuancheng municipal website. A hotline for information disclosure has been set up and a PMO staff is charged with the responsibility of answering any questions related to the project information and resettlement policy. Project information has been provided to the affected village through newspaper reports, posters, and public meetings. A resettlement information booklet with information about compensation rates, other entitlement policies, and grievance procedures will be distributed to the affected communities before the resettlement implementation. The SA was disclosed both in-country and on the World Bank external website on November 23, 2017. The final RAP, DDR and RPF were disclosed in-country on January 3, 2018 and on the World Bank's external website on the same day.

53. **Participatory strategy.** Focus group discussions and key informant interviews have been used to consult with potentially affected communities and individuals, the envisaged beneficiaries of the project and other project stakeholders. The primary focus of consultations has been on obtaining views about needs of citizens and their preferences regarding resettlement modalities and mitigation measures, including land rehabilitation measures. These views and preferences have been considered during the project design and the RAP revision. Currently, the majority of potentially affected persons agree that the resettlement and rehabilitation measures planned under the RAP would be adequate to address and mitigate any adverse impacts.

54. **Gender.** The project is gender-tagged. The World Bank team and the Anhui DOCA team conducted analyses of representative household surveys (chiefly 2013 and 2015 CHARLS) and SA, respectively, to ensure that the project contributes to closing the relevant gender gaps in Anhui. Findings from CHARLS and views and expectations of both male and female beneficiaries and caregivers recorded by the SA have been duly incorporated in the design of project interventions. The SA consulted both men and women equally during project preparation and this approach will continue during project implementation. Both SA analysis and analysis of household surveys show that women are expected to be overrepresented among beneficiaries of the project going forward.

55. With respect to direct beneficiaries of the project, women will more likely to benefit given the considerably higher life expectancy among women in China and their greater need for care (which, on average, increases with age). Currently, quality elderly care services are not affordable for the vast majority of elderly people in need of care, many of whom who do not have the ability to perform activities such as bathing, dressing, self-feeding, attending to personal hygiene, and toileting. Project interventions will increase access to care and, consequently improve quality of life (and ability to live with dignity) for these vulnerable groups. Female potential beneficiaries who were interviewed by the SA expect that the project will create and upgrade facilities with more recreational equipment, the staff will receive better training, and aged care services will be better integrated with medical services.

56. With respect to other beneficiaries of the project, the SA survey shows that the majority of aged care workers in project locations are female, accounting for 65 percent of all care workers, with this proportion being higher among care workers engaged in providing community-based and home-based care. Most care workers are between 40 and 50 years of age, and some are older. Stakeholders expect that the project will create many new jobs and positions in the aged care service industry, which will have a positive impact on female employment prospects in project localities. Formal elderly care workers (both male and female) were interviewed by the SA and they expect that the project would improve their working environment and conditions and allow for improved career opportunities. Stakeholders agree that the availability of formal care will reduce the burden of care, which is usually the responsibility of female family members.

57. The project is expected to have an impact on the East Asia and Pacific (EAP) regional gender priority gap which is to reduce trade-offs between women's household and market roles.[11] The major impact is expected through increasing female labor force participation (LFP) and, potentially, their voice and agency. This impact is expected because women are more likely to have family caregiving duties and multidisciplinary literature conclusively established that their welfare, on average, is reduced due to having to perform these caregiving tasks, especially when no formal alternatives are available. Adult Chinese women are also more likely to withdraw from the labor markets earlier than their male counterparts or female counterparts in comparator countries, including due to high burden of providing elderly care. Therefore, the availability of alternative care that could substitute for the care they provide gives them choices and, if they choose to avail formal care, the freed time can be used for labor market work and recuperation or leisure. Increased LFP is expected to increase women's earnings and improved leisure time is expected to contribute to the improved opportunities to exercise voice and agency. The relevant results indicators are Intermediate Results Indicator 11 'Weekly time use of family caregivers who provided aged care to their elderly recipients' and Intermediate Result Indicator 6 'Number of households with family caregivers who received respite services at the project sites'.

58. At the implementation level, the project will monitor social, economic, and gender inclusion during project implementation through periodic reviews and regular implementation support.

59. **Citizen engagement**. The project will create an open and fair environment to enable the civil society organizations to participate in the project activities by providing care services, carrying out communication and outreach campaigns, and acting as the third party to validate the services and other functions. The project will develop a public consultation action plan, at the implementation stage, to increase the stakeholders' awareness and collect their feedback to ensure the project's smooth implementation. The project will also establish a grievance redress mechanism at the provincial DOCA with sub-branches at the local PMOs and designated officers responsible for addressing the complains collected through the hotline and dedicated website. The Results Framework contains an indicator measuring the satisfaction of consumers and their families with aged care services. The PPMO will monitor the progress and conduct surveys to

[11] See "Toward the Gender Equality in East Asia and the Pacific; East Asia and Pacific Regional Gender Plan 2017-2023" for the description of five priorities for closing gender gaps in the EAP region.

collect project result indicators to measure client satisfaction (both from direct consumers and their families) at the beginning, midpoint, and at completion phases of the project.

M&E

60. The objectives of the M&E activities will be to: (a) track the progress and provide timely feedback on the implementation status and deliverables to PPMO, PIUs, and to the World Bank team; (b) estimate the effectiveness of the intervention; and (c) summarize lessons learned from the design and implementation that can be applied to future similar interventions in other provinces.

61. A set of results indicators has been agreed by the Government and the World Bank teams to measure project outputs, intermediate outcomes, and final development outcomes (see annex 1). Most of these indicators will be tracked on an annual basis by the implementation units and reported in the World Bank's Implementation Status and Results Reports. To the extent possible, the results M&E arrangements for the project will be integrated into the existing data collection and utilization mechanism of the PMOs and its subordinate agencies for the project.

62. Three types of M&E activities will be undertaken to monitor and assess the progress and achievement of the PDO, including (a) regular monitoring; (b) an MTR; and (c) an impact assessment of the project outcomes at the start and end the project.

63. **Regular monitoring** will look at the extent to which the proposed project activities are being implemented as planned and the direct outputs. Monitoring the achievement of the project's outputs and outcomes in a systematic way can provide timely information on the progress of the implementation and inform the project adjustment and/or restructuring as needed. The M&E activities will be conducted under Component 4 and will be led by the PPMO of Anhui DOCA. Monitoring of the PDO-level indicators will be carried out through the PMOs at the provincial level and each project site, monitoring intermediate outcomes will be conducted with administrative data and surveys, and the final outcomes of the project interventions will be evaluated by undertaking an impact assessment. The baseline and follow-up surveys will be carried out to support the evaluation.

64. Beyond monitoring the implementation of the project, the project will also help develop a provincial information system that is designed to collect the essential data, aiming to help the government of Anhui Province manage a diversified aged system. This activity will include the development of monitoring indicators and capacity building on database management and maintenance. The content will be determined by the provincial DOCA in coordination with other provincial agencies, local governments, service providers and operators, and customers. Data will be collected through administrative sources and various surveys by DOCA and local governments.

65. **An MTR** will be conducted during the third year of project implementation (or earlier), and the PPMO will consolidate an MTR report and submit it to the World Bank. In addition to monitoring the achievement of the PDO indicators and intermediate results indicators, the MTR will also attempt to analyze the early results of the effectiveness of the project, including possibly examining the emerging evidence of the project's effect on availability and quality of aged care services.

66. Most data for measuring outputs and intermediate outcomes will be collected through administrative sources. At the same time, two indicators – the satisfaction of consumers and their families with aged care services, and the time use of family caregivers will be collected through special purpose surveys. Additionally, a series of focus group discussions, interviews (with the elderly and family members, community centers and institutions, public and private service providers, local officials, and the implementation management team), and case studies will be conducted to summarize lessons learned and experiences accumulated during the first half of the implementation. The findings of the MTR will be fed into the project implementation and help the project refine and adjust the next stage of activities as needed.

67. **Evaluation**. The evaluation will assess the project's effects and the extent to which its final development objectives have been attained. Specifically, the evaluation will focus on assessing the impact of the intervention on the PDO and intermediate results indicators. The evaluation will be designed at two levels. At the overall project level, the assessment will be carried out at project entry, midterm, and closing to look at trends over the project implementation period and compare three data points on the key outcome measures. At the component level, an IE will be carried out to assess the aged care service outcomes in relation to various home-based, community-based, and institution-based interventions using a sampling and semi-structured survey instrument. Measures of client satisfaction would also be assessed through a three-wave survey of consumers and their families receiving various aged care services. These analyses will provide information on the magnitude of changes that have occurred and time-related trends. The evaluation will identify lessons on the types and modalities of interventions that work effectively and efficiently in contributing to the project achievement, as well as highlight factors that can enhance or hinder the effectiveness and efficiency of various interventions.

68. To complement the quantitative data analysis, the evaluation will collect qualitative data from various stakeholders to enrich information and analysis, such as by interviewing stakeholders (the elderly and their families, formal and familial caregivers, community groups, public and private providers, local government officials, project leaders, and PPMO staff) and by a desk review of a variety of forms such as research articles, policy notes, and other knowledge products.

69. The team considered an IE, but determined that the activities of the project are not amenable to a meaningful IE. Instead, using the funds secured from the 'EAP Umbrella Facility for Gender Equality', the team is fielding a baseline survey to answer broad structural questions regarding salient features of demand for and supply of care in the project locations as well as the impact of care provision on family caregivers. The ongoing survey combines quantitative and qualitative techniques. The sampling frame for urban areas covers several districts in Anqing and Lu'An, and selected households, residential facilities and residential communities in each. In rural areas (in Suzhou) the sampling frame covers two counties and two townships in each of them. In each of the townships, two villages will be selected. In residential and community facilities the survey questions cover information on the facility's operation, human resources, service supply, pricing, financing, and quality of care. The survey questionnaires also collect information on sociodemographic and needs characteristics of users, time use and other characteristics of familial care providers and various key attributes of the supply of aged care in the district. These are accompanied by qualitative interviews with the key stakeholders in charge of elderly care services using semistructured interview outlines. The intention is to field wave two of the survey midway through project implementation and wave three at the end of the implementation of the project, to

understand changes in patterns and impacts. The World Bank task team is making concerted efforts to mobilize resources for wave two and three; the project intermediate outcome indicator 11 – the time use of family caregivers – will be measured through these surveys.

70. The PPMO will provide overall leadership and management of the regular project monitoring, MTR, and evaluation. Independent consultants or consulting firms will be procured to undertake the M&E activities, including baseline data collection, database establishment, data aggregation, data analysis, and other data collection efforts during the MTR and project evaluation.

71. To strengthen the PPMO and implementation units' M&E capacity, the World Bank team will provide TA on M&E capacity building during the implementation of the project, as needed, to ensure that the M&E function has been established and integrated into the project.

Annex 4: Implementation Support Plan

CHINA: Anhui Aged Care System Demonstration Project

Strategy and Approach for Implementation Support

1. The World Bank will support the implementation of the Anhui Aged Care System Demonstration Project. Based on the risks identified and the mitigation measures proposed in the risk section, the World Bank team will provide the necessary support to facilitate achievement of the PDO as measured by the results and outcomes indicators defined in the Results Framework. The support will be focused on TA in the key intervention areas, M&E, fiduciary management, and safeguards. The World Bank will provide training and guidance on procurement, FM, and the social and environmental aspects of project management. The World Bank team will provide support through regular communication and meetings, implementation support missions, project documents review, and routine communications. The TA in the thematic areas will be provided in a broader context of the World Bank's operational and knowledge engagement in China.

Implementation Support Plan

2. The project is expected to become effective in the latter half of 2018 and has a five-year implementation period. The MTR will be scheduled by June 30, 2021. In view of the complexity and innovative features of the project activities, the World Bank team will provide intensive support for the implementation during the first 18 months of implementation. A project launch workshop, combined with the first implementation support mission, will be carried out around the time of project effectiveness. Regular implementation support missions will be conducted twice a year, and will include field visits. Technical missions will be organized between the regular implementation support missions, as needed. As most of the World Bank team is based in the country office, there will be regular meetings with Anhui DOCA and the PMOs to ensure that appropriate technical support is provided to assist Anhui to achieve timely implementation. The World Bank team will emphasize that the PMO should prepare progress reports and annual plans as a basis for the project implementation review as described in the Project Agreement.

3. The World Bank team will be led by task team leaders and consist of experts in the relevant technical areas, fiduciary management, safeguards, and general operations management. The main focus and detailed skills required are summarized as follows:

(a) **Procurement.** The World Bank team will ensure that procurement is conducted in accordance with the World Bank's guidelines and procedures by (i) providing training to the PMOs on the World Bank's Procurement Guidelines and procedures; (ii) reviewing procurement documents and providing timely feedback on procurement issues; and (iii) conducting field supervision and reviews at least twice a year to inspect the actual deployment and utilization of procured goods, civil works, and services.

(b) **FM.** The World Bank team will provide support by (i) carrying out regular desk reviews and communications with borrowers; (ii) frequently monitoring the adequacy of the FM arrangements, including accounting, auditing, budgeting, financial reporting, internal control, and funds flow; (iii) conducting site visits twice a year or

as necessary; and (iv) following up on action plans agreed as well as on observations derived from reviews of audit reports, management letters, and IFRs.

(c) **Safeguards.** The World Bank team will closely monitor the implementation of ESMP, RAP, and other safeguards instruments during project implementation to ensure compliance with the World Bank's safeguard policies. The safeguard specialists will visit the project sites twice a year. The World Bank team will monitor the activities to ensure that there are no adverse environmental and social impacts during the implementation.

(d) **Technical support.** Key areas of TA for the project include, but are not limited to, care services information management, needs assessment, quality standards and service delivery, purchase-of-services, institutional capacity building, and M&E. The World Bank team will mobilize experts who will be part of the World Bank's implementation support team, as needed, and provide timely guidance on technical issues.

(e) **M&E.** The World Bank team will organize training on M&E for DOCA and the PMOs in this regard. The World Bank team will emphasize regular updates of the indicators as defined in the Results Framework.

Table 4.1. Skills Mix Required for Implementation Support

Skills Needed	Number of Staff Weeks (SWs)	Number of Trips	Comments
Task team leadership (also covering the policy dialogue of aged care services policy and capacity building)	8 SWs in first 12 months and then 6 SWs annually	At least twice a year	Co-task team leader managed
Information management	3 SWs in first 12 months and then 2 SWs annually	At least twice a year	Consultant
Needs assessments, service standards, purchase of services	4 SWs in first 12 months and then 2 SWs annually	At least twice a year	Consultant
Procurement	3 SWs in first 12 months and then 2 SWs annually	Twice a year	Country office
FM	3 SWs in first 12 months and then 2 SWs annually	Twice a year	Country office
Environmental and social safeguards (including gender and other social aspects)	4 SWs annually	Twice a year	Country office
M&E	4 SWs in first 12 months and then 2 SWs annually, and 4 SWs in last 12 months	Twice a year	Consultant

Annex 5: Economic and Financial Analysis

CHINA: Anhui Aged Care System Demonstration Project

I. Financial Analysis

A. Project Background

1. The US$118 million IBRD loan will be onlent by the MOF to the Anhui provincial government, and by the provincial government to the five participating local governments (the municipalities and the county) on the same lending terms: Anqing, Lu'An, Suzhou, Ningguo (county-level city) and Xuanzhou (district), which are under the administration of Xuancheng City. The Anhui Bureau of Finance will guarantee the repayment of the loan allocated to the provincial-level activities. Local government and the project entities will be responsible for counterpart funding and debt service. The detailed counterpart fund provision and arrangement can be found in table 5.8. Financial assessments of the province, the participating municipalities, and the participating county were carried out to assess: (a) socioeconomic development; (b) government fiscal status; (c) government debt; (d) the projected revenues and expenditures of the project entities; and (e) counterpart funds requirements and availability. Accordingly, the financial analysis includes a forecast of revenues and expenditures from the services provided using the created assets. The financial analysis is conducted at the level of each project entity.

Table 5.1. Repayment Plan and Counterpart Funds Arrangement

	Debt Repayment				**Counterpart Fund**		**Repayment Plan**
	Total (US$, million)	**Principal**	**Interest**	**Equivalent (CNY, millions)**	**(US$, millions)**	**Equivalent (CNY, millions)**	
Provincial level government develops stewardship capacity	11.13	10.40	0.73	76.77	0.05	0.31	Provincial-level fiscal budget

	Debt Repayment				Counterpart Fund		Repayment Plan
Anqing government purchases services and builds community-based service stations	28.00	26.84	1.16	193.08	1.49	10.26	The Anqing prefectural government,the district governments and project entities are the repayment entities. For government-purchased services, the funds come from the fiscal budgetary fund and the public welfare fund with a ratio of 1:1. For government-built community-based service stations, the funds come from the fiscal budgetary fund, the public welfare fund, and project revenue with a ratio of 2:2:1.
Lu'An government purchases services, and upgrades community elderly care stations	15.00	14.03	0.97	103.43	0	0	The Lu'An prefecture government is the repayment entity. The source is fiscal budgetary fund.

Source: Staff calculations based on the project entities' feasibility study reports.

2. Information about debt repayment and counterpart funds arrangements are organized by project component and are presented in tables 5.1 and 5.2. As mentioned earlier, the provincial government will repay the loan for activities grouped under Component 1 of the project-'Supporting the Development of Government Stewardship Capacity'. The repayment will come from the general budget of Anhui Province. Selected activities in Component 2 of the project (Strengthening Community-based and Home-based Care Services) will be repaid from the general budget of the municipal-level and county-level governments in the relevant project sites (see Table 5.2). The selected activities in Component 3 of the project (Strengthening the Delivery and Management of Nursing Care) will be repaid by the project entities themselves or by general budget of the governments in the relevant project sites.

Table 5.2. Repayment Plan and Counterpart Funds Arrangement

	Debt Repayment (US$, millions)			Equivalent to CNY (millions)	Repayment Plan	Planned Fund Source for the Repayment
	Total	Principal	Interest	Total		

	Debt Repayment (US$, millions)			Equivalent to CNY (millions)	Repayment Plan	Planned Fund Source for the Repayment
Suzhou Rural Nursing Homes	10.00	9.77	0.23	68.96	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	Service charge, government subsidy and allowance, and revenue from farming and cultivation activities
Xuancheng Social Welfare Home in Xuanzhou	7.00	6.64	0.36	48.27	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	service charge and government subsidy for supporting Wubao elderly
Anqing No.1 People's Hospital	14.00	13.66	0.34	96.54	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	service charge and government subsidy on operation and construction
Ningguo Social Welfare Service Center	7.00	6.72	0.28	48.27	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	service charge and government subsidy for supporting Wubao elderly
Lu'An Chinese Medicine Hospital	23.00	22.10	0.90	158.60	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	service charge and government subsidy on operation and construction
Project management, M&E	2.87	2.68	0.18	19.77	Interest is deducted from the loan disbursements directly in the first 5 years; repay capital and interest from 6th to 25th year based on Equal Principal method	the corresponding provincial or prefectural or district-level fiscal budgetary.

Source: Staff calculations based on the project entities' feasibility study reports.
Note: The tables in this report are calculated under the US$/CNY exchange rate to be 1/6.9.These numbers are all from the feasibility study reports that the project entities submitted.

B. Socioeconomic Development

3. Anhui Province and the participating municipalities and counties (localities) enjoyed strong economic growth during the last five years. GDP in Anhui grew from CNY 1.24 trillion in 2010 to CNY 2.20 trillion in 2015, an average annual growth rate of 12.2 percent. Anqing, Lu'An, Suzhou, Xuancheng, and Ningguo County had an annual average GDP growth rates of 12.3 percent over the same period. Table 5.3 presents the main indicators of socioeconomic development of the participating localities in 2015, as well as the forecasted growth rate for 2018–2021.

Table 5.3.Main Socioeconomic Development Indicators

Indicator	Anqing	Luan	Suzhou	Xuancheng	Ningguo
Population (million, 2015)	4.59	4.74	5.54	2.59	0.38
Growth (%, 2018–2021)	–3.3	–3.9	0.8	0.4	–0.2
GDP (CNY, billions, 2015)	141.7	101.6	123.6	91.8	23.4
Growth (%, 2018–2021)	5.3	3.7	6.2	3.3	3.5

Source: Staff calculation based on Anhui Statistical Yearbook.

C. Government Fiscal Position

4. Sources of local fiscal revenue can be classified into two categories: (a) fiscal revenue, including tax and nontax revenue; and (b) non-fiscal revenue, including land-use rights and other non-fiscal revenue. Local fiscal revenues of the province and each locality increased substantially from 2010 to 2015: the average annual growth rate was 14.2 percent for the province, and 16.1 percent, 19.3 percent, 26.9 percent, 21.4 percent, and 15.1 percent for Anqing, Lu'An, Suzhou, Xuancheng, and Ningguo County, respectively. Local fiscal revenues of the participating localities are projected to increase by about 3.6 percent to 8.4 percent per year from 2018 to 2021.

5. An important source of public support for aged care in China is the 'Public Welfare Lottery Fund' (PWLF). According to the Ministry of Civil Affairs, funding from the PWLF accounts for slightly more than 60 percent of total funds spent on elderly welfare in China overall. A sustainable cash flow of the PWLF reflects the healthiness of the government fiscal status to provide counterpart funds and repay the loan.

6. The PWLF receives money from the proceeds of the Welfare Lottery. After deducting the lottery prizes and lottery issuing expenses, around 25 percent to 30 percent of the remaining Welfare Lottery sales flow to the PWLF. The PWLF is shared among central-, provincial-, and municipal-level governments: a total of 50 percent of it is reserved and used by the central government and of the remaining 50 percent one-quarter is retained at the provincial level and three-quarters at the municipal level. The PWLF is deposited with the DOF at different levels of the government on a special account as an earmarked fund.[12] It is counted as government's nontax income and is used exclusively for public welfare. According to a regulation from the central government, issued in 2015, more than 50 percent the PWLF has to be used to develop elderly service. The balance of the PWLF each year cannot be pooled with general budget but has to be carried over next year as income of the PWLF.

7. Based on the DOCA of Anhui Province data,[13] in Anhui, between 2010 and 2015 the annual growth rate of the sales volume of the Welfare Lottery was over 20 percent, reaching CNY 6.6 billion in sales volume in 2015 (with the PWLF reaching CNY 1.8 billion). A conservative forecast of the growth rate for 2018 to 2021 is 8.6 percent per year. Feasibility studies provided by the counterparts indicate that about half of the counterpart funds and repayment guarantee will come from the PWLF. This accounts for 13.7 percent of the estimated PWLF in Anhui for 2018. During the whole repayment period, the repayment responsibility of the PWLF takes account for only 2.6 percent of its total resources to be collected. Given the strong growth of the sales volume of the lottery and amount of resources the PWLF can potentially provide, the pressure on the governments to providing counterpart funds and the repayment guarantee is low.

8. **Government debt.** Project governments have borrowed to finance rapid urban and rural development in the last several years. However, the World Bank loan does not significantly affect the participating municipalities and county's financial positions. The loans represent only small

[12] "Notification on Further Implementation of Aged Care Service Industry Development Related Work" released by NDRC, Ministry of Civil Affairs, and National Committee on Aging in April 2015.
[13] See more information at http://www.ahmz.gov.cn/list_show.asp?id=2931.

portions (ranging from 0.01 percent to 1.11 percent) of the respective municipalities' and county's outstanding debts in 2016. Table 5.4 provides the summarized details.

Table 5.4.Government Debt Profile in 2016

	Anhui Province	Anqing City	Lu'An City	Suzhou City	Xuanzhou District	Ningguo Municipality
Accumulated debt at the end of 2016 (CNY, millions)	529,453.23	31,410.86	30,283.04	30,323.77	11,469	4,476.68
IBRD loan (CNY, millions)	78.38	296.95	268.67	70.70	49.49	49.49
IBRD loan as a share of the outstanding debt (%)	0.01	0.95	0.89	0.23	0.43	1.11

Source: Publicly released data from the DOF of Anhui Province and Finance Bureaus of the participating municipalities and county.

9. **Revenues and expenditures of the project entities** revenues of the project entities include two types of sources:

(a) **Government subsidies.** Aged care facilities receive per capita, operating, and one-time construction subsidies. While the national and provincial policies specify the types of subsidies that should be given to the providers of aged care services, each prefecture sets its own level of subsidies. For community-based aged care centers in urban areas, the policy mandates that community stations receive a one-time construction subsidy (for nursing care, the subsidy is given based on the number of 'beds'; for community centers, the subsidy is given on the 'per center' basis), and a subsidy for covering the social security payments of the staff employed there. Community stations that operate in rented premises receive rental subsides instead of construction subsidies. Privately run aged care agencies receive a one-time construction subsidy and annual operating subsidies. Per capita and operating subsidies to community-based centers (including those that are privately run) are topped up if centers serve the disabled elderly. The municipal-level governments determine the top-up standard. For rural nursing homes, governments provide a fixed-standard per capita subsidy for *Wubao* elderly. The level of subsidies is also determined by local governments. For the purposes of this analysis, the government subsidies that the project entities are eligible to receive are estimated based on the published local government policies, the estimated occupancy rates, and entities' own estimates of the disability case-mix of future residents. Rural nursing homes receive regular lump-sum allowances from local governments.[14] Calculations of the amount of government subsidies by category is given in table 5.5.

(b) **Service charges.** These are mainly composed of bed fees, nursing fees, meal fees, and treatment fees, as well as rehabilitation charges (in institutions that provide medical service). Service charges are a stable revenue source for nursing care providers. The

[14]Rural welfare homes also earn revenue from farming and cultivation activities on the land plots that belong to the homes. The level of revenues from farming and cultivation is imputed based on the observed income flow in the past years.

project entities developed detailed plans forecasting service charges for different services. The project entities also estimated occupancy rates for facilities based on current occupancy rates and actual waiting lists. Consistent with industry practices, the occupancy rate is assumed to be lower during the initial years of operation and increasing to about 80 percent after four to five years of facility operations. Total revenues from service charges are estimated for the repayment period of each project entity based on the envisaged level of service charges and the projected occupancy trajectory.

Table 5.5. Government Subsidy Policy That Apply to Proposed Projects

	Service Type	No Functional Disability	Slight Functional Disability	Medium Functional Disability	Severe Functional Disability
Anqing	One-time construction subsidy (CNY/bed, for the 2nd year)	5,000			
	Operating Subsidy (CNY/bed*year, since the 2nd year)	2,400	3,600	4,800	7,200
Luan	One-time construction subsidy (CNY/bed, for the 2nd year)	2,000			
	Operation subsidy (CNY/bed*year, since the 2nd year)	2,400	3,600	4,800	7,200
Xuanzhou	Three-no elderly (CNY/person*year)	2,714			
Suzhou	Wubao elderly (CNY/person*year)	6,000			

Source: Staff calculations based on the project entities' feasibility study reports and published government policy.

10. Table 5.6, shows the predicted total services charges in the 20-year repayment period by project locations. Depending on the capacity, function, and location of the facilities, the service charges vary significantly. In addition, it shows the other available revenue components expected for each project location, namely: (a) the one-time government subsidies (available for Anqing and Lu'An); (b) the recurrent government subsidies (available for Suzhou, Xuancheng, Anqing, and Lu'An); and (c) the government allowance and other revenues (only available for Suzhou). Aside from the one-time government subsidies, the total subsides in the 20-year repayment period is computed. For each city, the sum of the revenues from all the non-empty components are the total revenues the entities in the city can receive over the construction period and the repayment period.

Table 5.6. Financial Revenues of the Project Entities

Items	Revenue (US$, millions)	CNY equivalent (millions)
Suzhou Rural Nursing Homes		
Service charges (20 years)	17.5	120.7
One-time government subsidies (one time)	n.a.	n.a.
Recurrent government subsidies (20 years)	225.5	1,555.7
Government allowance and other revenues (20 years)	170.4	1,175.8
Xuancheng Social Welfare Home in Xuanzhou		
Service charges (20 years)	25.2	173.7
One-time government subsidies (one time)	n.a.	n.a.
Recurrent government subsidies (20 years)	0.8	5.4

Items	Revenue (US$, millions)	CNY equivalent (millions)
Government allowance and other revenues (20 years)	n.a.	n.a.
Anqing No.1 People's Hospital		
Service charges (20 years)	93.7	646.4
One-time government subsidies (one time)	0.7	5.0
Recurrent government subsidies (20 years)	11.6	79.9
Government allowance and other revenues (20 years)	n.a.	n.a
Ningguo Social Welfare Service Center		
Service charges (20 years)	26.2	181.0
One-time government subsidies (one time)	n.a.	n.a.
Recurrent government subsidies (20 years)	n.a.	n.a.
Government allowance and other revenues (20 years)	n.a.	n.a.
Lu'An Chinese Medicine Hospital		
Service charges (20 years)	65.3	450.5
One-time government subsidies (one time)	0.1	0.6
Recurrent government subsidies (20 years)	7.0	48.6
Government allowance and other revenues (20 years)	n.a.	n.a.

Source: Staff calculations based on the project entities' feasibility study reports
Note: The US$/CNY exchange rate we used is 1/6.9.

11. Expenditures of the project entities considered for this analysis consist of capital expenditures for construction and upgrading, and operating expenditures resulting from the project interventions. Capital expenditures include: (a) civil works and construction, renovation, decoration, and so on; and (b) purchase and installation of equipment. This analysis also considers expenditures such as: (a) administration and staff training fees; (b) preparation fees; and (c) other expenditures, for example, site expenditure for renting sites during the project construction period as capital expenditures, for the purposes of grouping them as pre-operation expenditures. Recurrent expenditures include: (a) wages of employees who provide services to clients; (b) utilities and facility maintenance expenditures; (c) food and implements expenditures; (d) administration costs; and (e) other miscellaneous expenses. These are calculated based on the existing patterns of expenditures, but incorporate the increased labor costs that will be incurred when treatment and nursing are extensively provided.

12. Table 5.7, shows: (a) the estimated incremental operating expenditures the 20-year repayment period; and (b) capital expenditures for construction and upgrading (project-specific expenditures) over the construction period by project locations. Similar to information presented in table 5.6, the sum of the two expenditure components are the total expenditures the entities will encounter before the end of the repayment period. To understand the financial status of these project sites, expenditures in table 5.7 are compared with the revenues in table 5.6. Results show that expected revenues are higher than expenditures.

Table 5.7. Financial Expenditures of the Project Agencies

Items	Expenditure (US$, millions)	CNY Equivalent (Millions)
Suzhou Rural Nursing Homes		
Recurrent expenditure (20 years)	53.8	370.9
Project-specific expenditure	13.4	92.2
Xuancheng Social Welfare Homes		
Recurrent expenditure (20 years)	10.2	70.6
Project-specific expenditure	12.3	85.2
Anqing No.1 People's Hospital		
Recurrent expenditure (20 years)	47.4	327.0
Project-specific expenditure	23.1	159.2
Ningguo Social Welfare Service Center		
Recurrent expenditure (20 years)	13.9	95.6
Project-specific expenditure	8.1	55.8
Lu'An Chinese Medicine Hospital		
Recurrent expenditure (20 years)	44.1	304.5
Project-specific expenditure	16.1	111.0

Source: Staff calculations based on the project entities' feasibility study reports.
Notes: (a) The US$/CNY exchange rate we used is 1/6.9; (b) The financial expenditures here include the original costs of the existing facilities and the incremental expenditures caused by the project interventions.

D. Counterpart Funds Requirements and their Availability

13. Information on counterpart funds is obtained from the feasibility study reports of the individual subprojects. These are compared to the estimated fiscal revenues that would result if the Government were to be responsible for providing counterpart funds and to the estimated revenue of the project entities that would result if they were to be responsible for providing the funds.

Table 5.8.Counterpart Funds Requirement and Arrangement

	Total Counterpart Funds Requirements		Source	Counterpart Funds Required/ Total Estimated Revenue of the Project Entities during Construction Period*
	US$, millions	CNY, millions		(%)
Suzhou	3.0	20.8	Government and project entities	4.28
Xuancheng	3.3	22.5	Government	0.05
Anqing	22.3	153.7	Hospital	10.13
Ningguo	1.2	8.3	Government	0.07
Lu'An	1.4	9.8	Hospital	5.92

Source: Staff calculations based on the project entities' feasibility study reports.
Note: For Xuancheng and Ningguo the total estimated revenues are for the project municipalities/counties.

14. The conclusion is that the total requirement for government funding in Xuancheng and Ningguo is relatively small: less than 0.1 percent of total fiscal revenue during the project construction period. The requirement Suzhou, Anqing No.1 People's Hospital, and Lu'An Chinese Medical Hospital will account for about 4.28 percent, 10.13 percent, and 5.92 percent of total revenue of these entities during the project construction period, respectively, which is consistent with their plans. The participating municipalities and county have committed to giving priority in their overall investment programs to investments under the proposed project and they have also committed to including the yearly funding requirements in their respective fiscal budgets during the construction period.

II. Economic Analysis

A. Broad Background on Aged Care Delivery and Financing and Rationale for Public Interventions

15. China is aging at an unprecedented rate. Improvements in life expectancy and the consequences of the decades-old family planning policy have led to a rapid increase in the proportion of the elderly population. According to the United Nations World Population Prospects, rapid ageing will occur in other parts of the world as well, so that by 2050 all regions of the world except Africa will have nearly a quarter or more of their populations at ages 60 and above.[15] Traditionally, care for the frail elderly has been the responsibility of the family, prescribed by the Confucian norm of filial piety. However, this practice is increasingly coming under strain. Public opinion polls show that Chinese citizens expect the Government to facilitate aged care services and invest in care and rehabilitation facilities for the elderly (World Bank 2018).

16. The question arises as to why public resources should be spent on elderly care. In the OECD countries, and in virtually all developed countries, public resources are typically used to pay for a substantial share of total long-term care costs for eligible recipients (European Commission 2014). Governments channel public financing to long-term care for the following reasons: (a) because long-term care services are not affordable for the vast majority of elderly people in need of care*;* (b) to relieve the care work of family members, for whom is it difficult to both provide care and participate in the labor market; and (c) because access to social care for the elderly reduces their and their familial caregivers' need for medical care (through prevention and substitution) and social care is less expensive. Accordingly, in most developed countries, formal long-term care is financed primarily through general taxation and/or obligatory social security contributions (Colombo et al. 2011). For example, in the United States, government-administered programs pay for care for over 75 percent of nursing home residents (Kaiser Family Foundation 2013).

17. Need for elderly care is defined as having limited functional ability and refers to an interaction between the deterioration in the intrinsic capacity of an individual to perform ADL and IADL and the environmental factors surrounding this individual. ADLs and IADLs describe the individual's ability to perform tasks, and include, but are not limited to, his/her abilities to get out of bed, take baths or showers, use the toilet, dress, prepare meals, eat, take medications, and manage money. The key dimension for defining limited function ability is dependence. Dependence indicates whether an individual needs the assistance of another person or special equipment to accomplish the task.

18. Four main parameters explain the differences in aged care spending in OECD countries: the source of finance, the rules defining eligible target groups (who are those in need of care), the forms and mix of care and services provided to the target group, and the forms of payment for service provision, as shown in table 5.9.

[15] United Nations, *World Population Prospects; Key findings and advance tables. 2017 Revision*, https://esa.un.org/unpd/wpp/publications/Files/WPP2017_KeyFindings.pdf

Table 5 9. Summary Review of Aged Care Financing Modalities in OECD Countries

Source of finance	• Tax-based (Nordic European countries) • Public, compulsory long-term care social insurance models (Germany, the Netherlands, Luxembourg, Japan, and Korea) • Co-payment by clients (a common requirement in many countries which may vary by care setting)
Eligible target group	• Level of care needs according to needs assessment, plus o Universal coverage o Means-tested, based on strict income or asset tests to set financial thresholds for eligibility for publicly funded care
Forms of services	• Home care • Community care (daycare centers) • Institutional (residential) care
Payment for service provision	• To eligible clients: cash payment or in-kind services, vouchers • To service providers: payment for time, services, or outcomes

Source: Based on Colombo et al. 2011.

19. China's Government is also moving in the direction of using these four main policy parameters to support the development of an equitable and efficient age care system. The Government policy is to develop an aged care system where private provision and private payment would be dominant modalities in developing a market where individuals and families can find services according to their needs and resources. At the same time, the Government would continue guaranteed subsidized support and aged care services for the indigent poor.

20. Beyond developing services for the indigent poor, in recent years, most advances in policy developments and implementation have been made in encouraging the private sector to respond to the private demand for aged care services. Yet, responding to the revealed private demand alone will not allow a market to develop. As formal aged care services are expensive, there is a wedge between the private demand (also called effective demand) and the need (determined by the degree of individuals' disability or impairment) for care, with the latter usually exceeding the former. Without government interventions and subsidies, only high-income individuals will be able to afford services that are produced in the market. Because the poor who qualify as welfare recipients are covered by public resources and the rich are able to pay for privately produced services, it is the broad middle class that, in the absence of government intervention, will not have access to the services they need and will therefore have to rely on informal/familial provision of aged care. As this outcome is not desirable (nor acceptable to China's Government), one of the Government's roles, therefore, is to foster market development by subsidizing services more broadly to allow for a broad consumer base. While there is no full embrace of the approach to subsidize aged care services based on need by the Chinese Government, the 13th Five-Year Plan for the Development of Elder Care Services and Building of Elderly Care System makes a commitment that the establishment of the long-term care insurance system will be piloted during the five-year period.

21. In developing the aged care market, in addition to the financing role, the Government must play a stewardship role, because the providers of services are increasingly private entities. Both financing and other stewardship functions, such as ensuring quality and safety of the services provided, are challenging, because of the specific features of the aged care market. First, similar to the health care market, there is a large information asymmetry between providers and consumers, making competition and informed consumer choice difficult. Second, where the government is neither a major provider nor a financier (and does not set prices), it needs to find ways of influencing service quality and the pricing strategy of private providers through other means.

Otherwise, this behavior would be driven by profit maximization in a non-competitive market. Finally, while private insurance could have been a vehicle for aged care financing, there is little development of private insurance for aged care around the world. One major reason is that private insurance for aged care is expensive and beyond the means of most people. Even if affordability is less of an issue, individuals tend to be myopic, and when they are young they do not believe that they will need aged care in later years. There also exists moral hazard: if aged care insurance is private and voluntary, those who know that they are at a high risk of disability and needing care will be most likely to purchase insurance, making the pool composed of many high-cost individuals and increasing premiums for all. In addition, since the package of aged care services typically includes services that are valued generally (for example, housekeeping, meal preparation), otherwise healthy individuals would also want to qualify for those services. Certainly for publicly financed services, the government needs to exercise a 'gatekeeping' role to ensure that those services meet minimum quality standards and reach those individuals who have the most need.

B. Project's Development Impact in terms of Expected Benefits and Costs

Project Activities, Costs, and Benefits

22. The project will invest US$197.88 million of the loan and counterpart funds to strengthen government capacity for stewardship in a province with a population of 60 million and to create an approximately 3045 nursing beds in urban areas and 1,446 beds in rural areas, and to provide community or home-based care services to the elderly living in two municipalities whose total population is about 9.32 million. As such, it will support the government of Anhui Province in establishing and managing a diversified (public and private) system of delivery of aged care services, including home, community and residential services, that serves the key target group: the elderly with limited functional ability.

23. The impacts and benefits of this project will differ across the geographic areas because interventions differ across them. In particular, this analysis will distinguish across: (a) benefits accrued in the whole province, because the project is strengthening the stewardship functions of the provincial government; and (b) five project locations, where the project is directly creating new aged care services. With regard to the benefits and impacts, this analysis will account for: (a) reduced expenditures on medical services; (b) increased earnings (labor income) of family members of elderly with care needs; and (c) increased earnings of the formal caregivers working at these newly created/upgraded aged care institutions.

Geographic Distribution of Benefits

24. **Whole province - strengthening the stewardship functions of the Government.** The benefits will accrue to all elderly living in the province who are currently in need of care services, as well as to their families, who are currently providing care. It will also benefit the elderly in the province who are currently well and will have choices to access more affordable and better quality care should they choose to purchase it. These benefits are expected because the development of government's stewardship capacity will improve the availability and quality of aged care supply, which, in turn, will delay deterioration in the health condition of the elderly, and allow them to reduce their need for medical services utilization. More specifically the project will develop a comprehensive information platform, develop an ability assessment and quality standards, and

improve skills of aged care professionals and providers. The information platform will facilitate aged care industry administration, related policy design, service contracting, and quality monitoring. Both information platform and ability assessment system will also serve the Government and the public allowing for efficient matching of needs and services, as well as targeting of public subsidy. Development of quality standards and training of human resources will also improve efficiency and quality of care, leading to delaying the deterioration in health and lowering the probability of need for medical care.

25. **Five project locations - directly creating new aged care services**. These services will include home-based, community-based, and institutional services, benefiting the current elderly living in the project sites, who are in need of services, and members of their families who are providing care. Measurable benefits from directly creating new infrastructure and new services are expected because of reduced expenditures on medical services and increased earnings (labor income) of family members of elderly with care needs. Because the project will put in place these services during the project duration, the effect of directly creating new aged care services is expected to be larger than those effects stemming from improving stewardship alone.

Benefits and Impacts of the Project

26. **Reduced expenditures on medical services.** This will take effect in three ways. First, the elderly who have acute needs and/or disabilities and routinely seek care in medical establishments will have options for substituting medical care with social care. Some of them will take these options, thus reducing the use of medical care (that is typically costlier than social care). Consequently, public and private medical costs will be reduced. In those localities where the project is developing home-based and community-based care elderly with severe needs and disabilities will also have options to substitute more expensive institutional [residential] care with home- and community-based care.

27. Second, the elderly who are in a fragile state (especially those with ADL restrictions), are expected to experience reductions in the occurrence of injuries once they make use of care services. Studies have found that when care provision is absent or not sufficient, the elderly face high risk of unexpected injury and other accidents, which leads to high medical expenses for related treatments (Weaver and Weaver 2014; Torbica, Stefano, and Fattorea 2015). Consequently, hospital admissions and readmissions, as well as the length of stay in hospitals will be reduced, thereby reducing public and private medical expenditures (Cho, Kim, and Lee 2013; Choi and Wodarski 1996). In Anhui, the share of people ages 45 to 49 suffering from ADLs is 2.5 percent for women and 1.8 percent for men. The share increases by 30 percent for women and 20 percent for men when they reach the age of 80. (CHARLS 2011 and 2013).

28. Third, familial care providers' health condition (both physical and mental) is expected to improve with the availability of a formal aged care system, because they will have wider choices. A number of studies showed that familial caregivers suffer increased incidences of anxiety, depression, joint injury, and so on and that medical expenditures on medications are higher among familial caregivers. (Adelman et al. 2014; Mahoney et al. 2005; Gallagher et al. 1989). The impact on those caregivers who have to provide long-term care to ADL disabled elderly rather than IADL disabled or the elderly who are well is found to be more severe. A number of studies demonstrated that family members who are care providers take the options of substituting their care for formal

care, when formal care (especially respite service) is available. In Anhui, 58.1 percent of total care provided to the elderly is from spouses. The majority of spouses of the elderly are also elderly, while 33.6 percent of all care provided are from children (CHARLS 2011 and 2013).

29. **Increased earnings (labor income) of family members of elderly with care needs.** The causal relationship between caregiving and lower participation in market work (lower probability of working, lower hours of work, lower earnings, and lasting impact on labor market performance) has been robustly established in economic literature (Fahle and McGarry 2017). Consequently, with a formal care provision system established in Anhui, family members, especially adult children, will have more options to seek care in the market and, as a result, will be able to provide less care in-kind. The children who are the main providers of care to parents will be able to rejoin the labor market. In Anhui, 88 percent of aged care is provided solely by family members. Within families, adult children and children's spouses provide 33.6 percent of total care (CHARLS 2011 and 2013). Among female workers ages 45 to 50 who participate in the labor market, those who provide care to parents work 10 hours less per week than those who do not. Comparing hourly wages earned and controlling for other factors, family care providers earn significantly less than those who do not provide family care (Yu and Feng 2016; Qi and Dong 2016). The difference is mainly attributed to limitations in labor market choice from providing family care.

30. **Increased earnings from direct job creation at the newly created/upgraded aged care institutions**. The project will directly create new jobs, mostly for caregivers. The number of these jobs can be estimated based on the capacity of the facilities and the potential wages can be estimated based on the wages of similar sectors in corresponding locations.

31. **Nonquantifiable benefits.** Many of the expected benefits are broad and long term in nature and are difficult to quantify in monetary terms. More specifically:

(a) The project activities will increase the set of choices available to individuals and families, which by itself, is a utility enhancing development;

(b) Project interventions are expected to improve the overall quality of elderly care services, and one important beneficiary group is the poor. As a result of project activities there will be a greater overlap in the services used by both poor and middle class. Literature shows a strong effect of increase in quality and service satisfaction among the beneficiaries of various social services programs created for the poor, once the middle class also has a stake in these programs; and

(c) The project will also greatly enhance the elderly's opportunities to live with dignity. Universally, societies direct public resources to help those who do not have physical ability for independent living, including such activities as bathing, dressing, self-feeding, attending to personal hygiene, and toileting.

32. Overall the structure of impacts and benefits of the proposed project are complex. To summarize, the quantifiable benefits of the project activities are as follows:

(a) Reduced rate of public and private expenditures on medical care due to substitution of more expensive medical care with less expensive social care; reduction in injuries and, consequently, reduction in in-patient and out-patient admissions (and hospital stay) of both elderly who are well and elderly with ADLs (who will have access to

care services and will be much less frequently exposed to activities causing injuries); reduced episodes of physical and physiological illness among the family care providers' and therefore reduced rate of their use of prescription medications and medical services;

(b) Increased earnings in households with prime-aged adults and the elderly needing care, due to adult children caregivers' time for the labor market; and

(c) Increased earnings of the formal caregivers working at these newly created/upgraded aged care institutions.

C. Cost Benefit Analysis

33. It is the conclusion of cost-benefit analysis performed that the project interventions are estimated to be cost effective. The availability of aged care services where consumers can find services consistent with their preferences and resources yields benefits, in both private and social terms. Because not all benefits can be quantified or monetized (as explained earlier), the estimated benefit evaluation is considered to be the lower bound of the total benefits.

34. The cost-benefit analysis is implemented based on the following assumptions. The construction period is four years with annual disbursements of 20 percent, 40 percent, 30 percent, and 10 percent. The infrastructure created by the project will serve for 30 years after completion. The intended benefits components of the project and their potential beneficiaries are listed in table 5.10.

Table 5.10.Intended Benefits Components and Their Potential Beneficiaries

Project Activity	Project Entity	Activity Content	Anticipated Benefits*	Beneficiaries
1. Supporting the Development of Government Stewardship Capacity	Provincial-level government	Set up aged care service information system, elderly ability evaluation, training for caregiving professional and aged care services standard system.	Higher efficiency and improved quality of the system leads to a reduction of medical expenses of the elderly and an increase in market working hours of familial caregivers (those in working age), after the system is set in place.	Entire elderly population of the province and their adult children
2. Strengthening Community-based and Home-based Care Services	Anqing government	Purchase services: Empty-nest elderly visiting service, elderly ability evaluation, home-based aged care to supported *Wubao* elderly, meal delivery service to empty-nest elderly, respite service, and other services	Direct availability of services leads to a reduction in medical expenses of the elderly and an increase in market working hours of familial caregivers (those in working age), from the time when services became available.	The elderly who are using care services in the three project cities. familial caregivers of these elderly
	Anqing government	Build up community-based service stations: new construction, upgrading, decorating, and improving facilities of community-based services stations		
	Lu'An government	Purchase services: empty-nest elderly visiting service, elderly ability evaluation, service purchase for elderly in difficulties, subsidy to senior elderly in using community-based care, subsidy to low-income elderly, catering service in community, meal delivery for empty-nest elderly, respite service for families with disabled elderly, and cultivating social organizations		
	Lu'An government	Set up all-in-one care system for using aged care services		
	Lu'An government	Build and upgrade community aged care stations		
3. Strengthening the Delivery and Management of Nursing Care	Suzhou government	Upgrade welfare homes: (a) build new beds and upgrade beds. At maximum increases 1,446 beds for disabled and semi-disabled elderly; (b) improve surrounding infrastructure, equipment, staff skill, and management; and (c) upgraded welfare homes can respond to government purchase of providing support to policy concerned elderly.	Direct availability of services leads to a reduction in medical expenses of the elderly and of the familial caregivers, from the time when services became available. It also leads to an increase in market working hours of familial caregivers (those in working age).	The elderly who are using skilled nursing care in the project cities; familial caregivers of these elderly
	Xuancheng government	Increase capacity of welfare homes: build 400 new service beds, including 100 for regular elderly and 300 for disabled or semi-disabled elderly		
	Anqing First People's Hospital	Newly build 300 beds for disabled elderly, 450 beds for semi-disabled elderly, 50 beds for hospice, and 200 beds for regular elderly.		
	Xuancheng: Ningguo government	Update social welfare service center and build 260 beds for disabled and semi-disabled. Set up information center for elderly service provision		
	Lu'An Chinese Medicine Hospital	Build up elderly care center: build 600 beds for disabled and semi-disabled elderly		

***** Improvements in the government stewardship capacity will lead to a reduction in the average medical expenditure among elderly by 2 percent; availability of community- and home-based services will reduce their medical expenditures by 5 percent. Availability of skilled nursing will reduce medical expenditures of the elderly who make use of skilled nursing beds by 20 percent and medical expenditures of their familial cares will also be reduced by 20 percent; see more on this below.

Estimates of Health Status of the Elderly in Anhui

35. Estimating medical expenditure savings requires information on the health status of the elderly population in Anhui. The prevalence of ALD and IADL limitations by age group, of those over age 45 years, is listed in table 5.11. The projected population of each age group for each year from 2018 to 2051 in Anhui is obtained from World Population Prospects on China, published by the United Nations Population Division. The proportion of the population with ADL and IADL limitations is projected for each year by multiplying the current prevalence by the projected population, for each age group, and then summing the results. (table 5.11).

Table 5.11. Prevalence of ADL and IADL by Age Groups

Age Group	Prevalence of ADL Limitations (%)	Prevalence of IADL Limitations (%)
45–49	1.6	5.3
50–54	2.5	8.4
55–59	3.6	11.4
60–64	5.6	13.4
65–69	8.8	18.1
70–74	11.3	21.8
75–79	14.4	29.5
80+	27.8	48.9

Source: Calculated based on CHARLS data (Giles et al. 2015).

36. A combined health status (CHS) index is constructed to indicate the extent of the medical expenditure and family support hours required to care for the elderly. The CHS index is useful for estimating the change in medical expenditure and family support hours required as the prevalence of ADL and IADL limitations of the elderly changes. The index is constructed such that the percent change in the index is an estimate of the percent change in medical expenditure and family support hours. Construction of the CHS index follows the methodology of Quality of Wellbeing Scale developed by Kaplan and Anderson (Kaplan and Anderson 1988) and refined and applied for estimating health status of population in China by Zhao and Hou (2005) and Feng et al. (2015). The value of the CHS index from 2018 to 2051 is in table 5.12.

Table 5.12. Projection of Population Size with ADLs and IADLs

Period	Year	Population 65 years and over	Population with ADL	Population with IADL	CHS Index
Project Construction Period	2018	1,808,241	243,693	469,893	0.176
	2019	1,901,676	254,546	491,145	0.175
	2020	1,986,075	264,419	510,518	0.174
	2021	2,064,224	275,804	532,119	0.175
Project Benefiting Period	2022	2,133,758	286,311	551,948	0.176
	2023	2,199,897	296,441	571,105	0.176
	2024	2,270,149	306,887	591,133	0.177
	2025	2,349,056	318,074	612,961	0.177
	2026	2,434,649	331,940	639,591	0.178
	2027	2,525,118	346,013	666,986	0.179
	2028	2,622,569	360,726	695,719	0.180
	2029	2,729,626	376,685	726,581	0.181
	2030	2,847,518	394,180	759,958	0.181

Period	Year	Population 65 years and over	Population with ADL	Population with IADL	CHS Index
	2031	2,970,654	414,491	797,703	0.183
	2032	3,102,521	435,924	837,307	0.184
	2033	3,239,035	457,619	877,420	0.184
	2034	3,374,372	478,509	916,343	0.185
	2035	3,504,703	498,111	953,271	0.185
	2036	3,624,703	518,070	990,513	0.186
	2037	3,739,710	536,848	1,025,804	0.187
	2038	3,846,048	554,489	1,059,064	0.188
	2039	3,938,854	571,090	1,090,270	0.189
	2040	4,015,556	586,718	1,119,440	0.190
	2041	4,070,784	602,614	1,148,253	0.193
	2042	4,110,030	616,915	1,174,003	0.195
	2043	4,138,882	630,345	1,197,972	0.198
	2044	4,164,232	643,610	1,221,429	0.201
	2045	4,190,173	656,930	1,244,806	0.204
	2046	4,210,322	671,445	1,269,590	0.207
	2047	4,229,912	685,842	1,294,046	0.210
	2048	4,254,193	699,891	1,317,969	0.213
	2049	4,291,920	713,736	1,341,858	0.215
	2050	4,348,958	727,854	1,366,670	0.216
	2051	4,348,958	727,854	1,366,670	0.216

Source: The task team's calculation based on Chinese Statistical Yearbook 2015 (National Bureau of Statistics of China) and World Population Prospects on China (United Nations Population Division).

Estimates of Medical Expenditures

37. **Public and private medical expenditures without project interventions.** Public medical expenditure accounts for 56 percent of total health expenditures and are estimated for Anhui Province at CNY 8,065 per capita, per year for those over 65 years of age in 2014. For people ages 45 to 64, they are estimated at CNY 1,675 per capita per year.[16] Private average out-of-pocket medical expenditure by age group from year 2010 through 2014 are calculated based on the 2013 CHARLS data, as shown in table 5.13.

Table 5.13. Medical Expenditures in Anhui, 2010–2014

Year	Out-of-pocket Health Expenditure (CNY)		Total Health Expenditure (CNY)	
	Ages 65 and over	Ages 45–64	Ages 65 and over	Ages 45–64
2010	4,627.0	1,471	10,468	3,329
2011	5,000.0	1,434	11,313	3,244
2012	5,415.0	1,397	12,251	3,161
2013	5876.2	1,362	13,295	3,080
2014	6,389.0	1,327	14,455	3,002

Source: The task team's calculations based on Feng et al. (2015).

[16] http://data.worldbank.org/indicator/SH.XPD.PUBL.

38. Based on the change of the CHS index between 2010 and 2014, the annual growth in medical spending from 2010 to 2014 is 8.4 percent for those over 65 years of age, and −3.3 percent for those ages 45 to 64. This medical spending growth rate is applied to the following years to project per capita medical spending. This projection of medical spending takes into account projected changes of the health status of the elderly.

Table 5.14. Health Expenditures in Anhui, 2018–2051 (projections)

	Year	Average Medical Expense of Population 65 years and over (CNY per capita)	Adjusted Medical Expense of Population 65 years and over	Average Medical Expense of Population Ages 45 to 64 (CNY per capita)	Adjusted Medical Expense of Population Ages 45 to 64
Project Construction Period	2018	18,395	18,395	2,716	2,716
	2019	19,934	19,805	2,618	2,610
	2020	21,602	21,493	2,547	2,562
	2021	23,409	23,484	2,494	2,525
Project Benefiting Period	2022	25,367	25,465	2,460	2,509
	2023	27,489	27,598	2,439	2,500
	2024	29,789	29,882	2,422	2,487
	2025	32,281	32,341	2,405	2,468
	2026	34,982	35,221	2,385	2,446
	2027	37,908	38,107	2,368	2,430
	2028	41,079	41,246	2,346	2,403
	2029	44,516	44,665	2,309	2,351
	2030	48,240	48,379	2,253	2,273
	2031	52,276	52,645	2,176	2,173
	2032	56,649	56,991	2,083	2,062
	2033	61,388	61,674	1,982	1,949
	2034	66,524	66,730	1,881	1,845
	2035	72,089	72,229	1,785	1,752
	2036	78,120	78,523	1,692	1,659
	2037	84,655	85,001	1,604	1,572
	2038	91,737	92,113	1,525	1,498
	2039	99,412	99,953	1,457	1,440
	2040	107,728	108,530	1,404	1,399
	2041	116,740	118,200	1,362	1,366
	2042	126,506	128,192	1,331	1,345
	2043	137,090	139,008	1,310	1,332
	2044	148,558	150,656	1,296	1,327
	2045	160,986	163,179	1,290	1,328
	2046	174,454	177,270	1,290	1,334
	2047	189,048	192,008	1,299	1,353
	2048	204,863	207,669	1,311	1,367
	2049	222,002	224,227	1,313	1,360
	2050	240,574	241,966	1,299	1,329
	2051	260,700	260,700	1,257	1,257

Source: The task team's calculations.

39. **Public and private medical expenditures with project interventions.** A number of quantitative assumptions about changes in medical expenditures have been derived on the basis of data and calculations presented in 'Deepening health reform in China, building high-quality and value-based service delivery', a Joint Study Partnership between the World Bank Group, World

Health Organization, MOF, National Health and Family Planning Commission, and Ministry of Human Resources and Social Security, Report No. 107176) and on the basis of economic analysis presented in the China Health Reform Program for Results (Report No. 113233–CN). Specifically:

(a) Improvements in the government stewardship capacity for elderly care will lead to a reduction in the average medical expenditure among elderly by 2 percent. The effect will take place once all stewardship capacity improvement activities are completed (at the end of the project implementation period);

(b) Availability of community- and home-based aged care services system in three project cities will reduce medical expenditures by 5 percent;

(c) Availability of skilled nursing will reduce medical expenditures of the elderly who make use of skilled nursing beds for the disabled or semi-disabled by 20 percent. The main target group of skilled nursing is the elderly with who are disabled or semi-disabled and those who need rehabilitation and care with professional support. Medical expenditures of familial cares of the disabled elderly who will use skilled nursing will also reduce by 20 percent; and

(d) Availability of skilled nursing for the disabled and semi-disabled elderly will reduce medical spending for those who provided care by 10 percent and medical spending for those who provide care to the self-dependent elderly by 3 percent. This includes both older caregivers, who provide 58 percent of total aged care and younger caregivers who provide 34 percent of total aged care.

40. Estimates of the reduction in medical expenditures weighted by the demographic composition of project beneficiaries for all components of the project are given in table 5.15.[17]

Table 5.15. Estimates of Savings in Medical Expenditures by Project Activities

Year	Government Stewardship Improvement	Community and Home-based Care System Development	Skilled Nursing Development		Total Medical Expense Saved (CNY million)
			Medical Expense of the Elderly (CNY, millions)	Medical Expense of the Original Caregivers	
2022	4,159	1,572	171	8	5,910
2023	4,647	1,757	185	8	6,597
2024	5,192	1,964	201	9	7,366
2025	5,815	2,203	217	10	8,245
2026	6,563	2,474	236	11	9,284
2027	7,365	2,781	255	11	10,413
2028	8,279	3,130	277	12	11,698
2029	9,332	3,530	300	13	13,175
2030	10,544	3,990	325	14	14,874
2031	11,970	4,511	352	16	16,849
2032	13,534	5,105	382	17	19,038
2033	15,290	5,776	414	18	21,498
2034	17,235	6,521	448	20	24,224
2035	19,376	7,339	486	21	27,222
2036	21,785	8,225	527	23	30,561
2037	24,331	9,196	571	25	34,123
2038	27,116	10,249	619	27	38,011
2039	30,134	11,375	670	29	42,209

[17] Note that the numbers in Table 5.8 are the gross savings in medical expenditures caused by project interventions. For the benefit-cost analysis in section 5, we take the net savings in medical expenditures (gross savings in medical expenditure – costs of elder care) as the benefits generated by the project interventions.

Year	Government Stewardship Improvement	Community and Home-based Care System Development	Skilled Nursing Development		Total Medical Expense Saved (CNY million)
			Medical Expense of the Elderly (CNY, millions)	Medical Expense of the Original Caregivers	
2040	33,358	12,566	727	32	46,682
2041	36,829	13,805	788	34	51,456
2042	40,328	15,104	854	37	56,322
2043	44,037	16,482	925	40	61,485
2044	48,020	17,971	1,003	44	67,037
2045	52,335	19,595	1,087	47	73,065
2046	57,128	21,337	1,178	51	79,694
2047	62,165	23,229	1,278	56	86,728
2048	67,622	25,317	1,385	60	94,384
2049	73,661	27,678	1,501	65	102,905
2050	80,545	30,392	1,627	70	112,634
2051	86,781	32,935	1,763	75	121,554

Source: The task team's calculations.

Estimates of Wage Income Increase due to Increased Labor Force Participation of Informal Caregivers

41. As discussed earlier, familial caregivers will benefit from having choices as to whether to continue providing care or purchase it in the market (if it is available). Given that the median education level of familial caregivers in Anhui is higher than that of paid caregivers, it is expected that once given a choice, many will opt for market work, given that their wages will be higher than that of the paid caregivers. Outsourcing care services can therefore result in increased income for families who need to purchase care services and increased employment among paid caregivers.

42. A number of quantitative assumptions about changes in LFP, working hours, and resulting wages are derived on the basis of data collected by CHARLS, China Labor Statistical Yearbook, and background information provided in the project entities' feasibility study reports. More specifically:

(a) Improvements in the government stewardship capacity for elderly care will lead to an increase in market work of the adult children of the elderly by 2 percent. The effect will take place once all stewardship capacity improvement activities are completed (at the end of the project implementation period);

(b) Availability of a community-based and home-based aged care system will lead, on average, to one hour of family care saving every day for each elderly person with ADL and IADL limitations in the three project cities;

(c) The excess of the average hourly wage in Anhui over the wage of formal caregivers is an indicator of the gain that can be achieved from outsourcing care service. An annual wage increase of 5 percent is assumed, according to the estimated economic growth for both family member caregivers and formal caregivers;

(d) Availability of skilled nursing, will lead, on average, to eight hours per day of family care saved for those who make use of beds for disabled and semi-disabled care. On average one hour of family care will be saved every day for those who make use of beds for the self-dependent elderly. Only 33.6 percent of the total caring hours saved is calculated using market value, because only 33.6 percent of total family care given to elderly members is provided mainly by children who are of working age;

(e) The expected hourly wage of these caring hours saved is calculated based on the estimated per capita disposable income in Anhui using 2014 data, and applying a 5 percent annual increase according to estimated economic growth; and

(f) Taking both private payments and government subsidies into account, the fee for nursing care for the disabled and the semi-disabled is estimated to be CNY 4,500 per month, and the fee for nursing care for the self-dependent elderly is estimated to be CNY 3,000 per month.

Table 5.16. Estimates of Added Wage Income from Market Work

Year	Government Stewardship Improvement	Community and Home-based Care System Development	Skilled Nursing Development (CNY million)			Total Added Wage Income From Market Work
			Value of Increased Market Working Hours	Recurrent Fee of Skilled Nursing	Net Gain of Increased Market Working Hours	
2022	8	2	306	30	275	285
2023	9	2	321	32	289	300
2024	10	2	337	33	304	316
2025	11	2	354	35	319	332
2026	12	3	372	37	335	349
2027	13	3	390	39	351	367
2028	14	3	410	41	369	386
2029	15	3	430	43	387	406
2030	17	4	452	45	407	427
2031	19	4	474	47	427	450
2032	20	4	498	49	449	473
2033	23	5	523	52	471	498
2034	25	5	549	54	494	525
2035	27	6	576	57	519	552
2036	29	6	605	60	545	581
2037	32	7	635	63	572	611
2038	35	8	667	66	601	643
2039	37	8	701	70	631	677
2040	40	9	736	73	663	712
2041	43	9	772	77	696	749
2042	46	10	811	80	731	787
2043	50	11	852	84	767	828
2044	53	12	894	89	805	870
2045	57	12	939	93	846	915
2046	61	13	986	98	888	962
2047	65	14	1035	103	932	1011
2048	69	15	1087	108	979	1063
2049	74	16	1141	113	1028	1118
2050	79	18	1198	119	1079	1176
2051	83	18	1258	125	1133	1235

Source: The task team's calculations.

Estimates of Benefits (Wage Income) from New Jobs Creation

43. The third component of quantifiable benefits of this project, the income increase generated directly by the new jobs created. Corresponding wages for each kind of job are estimated based on local wages in the same sector. Having both the number of jobs created and their wage estimates in hand, allows estimation of these benefits.

44. The relevant estimates for each project locations obtained from the feasibility study reports

are as follows:

(a) Suzhou Rural Nursing Homes. A total of 376 new jobs have been created. As these nursing homes are located in rural areas, the average monthly salary and benefits of the newly employed caregivers will be about CNY 1,500;

(b) Xucheng Welfare Home. The number of newly created jobs is 55 and the corresponding salary and benefits will be CNY 2,280 per month;

(c) Anqing No.1 People's Hospital. The project intervention will create 300 new jobs, and the salary and benefits the workers will be CNY 2,280 per month;

(d) Ningguo Social Welfare Service Center. A total of 100 new jobs will be created, and the workers can expect to receive compensation that amounts to CNY 2,500 per month;

(e) Lu'An Chinese Medicine Hospital. The project is supposed to hire 5 new doctors, 18 new therapists, 3 new specialized nurses, 90 new nurses, 22 new support crew members, and 12 new administrative staff members. There corresponding monthly salary and benefits for each type of jobs are CNY 5,000 for doctors, CNY 4,667 for therapists, CNY 3,333 for specialized nurses, CNY 3,000 for nurses, CNY 2,500 for support crew members, and CNY 4,167 for administrative staff members;

(f) Annual wage growth rate is assumed to be 5 percent; and

(g) Among newly hired workers, some of them may be unemployed in the absence of the project interventions and some of them may work in some other places and receive lower compensation. Therefore, the benefits generated by job creation are lower than the overall salary and benefits received by these workers. This analysis assumes that 30 percent of the overall salary and benefits are generated by the project interventions.

Table 5.17. Estimates of Income Increase Generated by Job Creation (CNY million)

Year	1. Suzhou	2. Xuancheng	3. Anqing	4. Ningguo	5. Lu'An	Salary Increase
2022	7.14	1.50	8.21	3.00	7.33	8.15
2023	7.49	1.58	8.62	3.15	7.69	8.56
2024	7.87	1.66	9.05	3.31	8.08	8.99
2025	8.26	1.74	9.50	3.47	8.48	9.44
2026	8.68	1.83	9.98	3.65	8.91	9.91
2027	9.11	1.92	10.48	3.83	9.35	10.41
2028	9.57	2.02	11.00	4.02	9.82	10.93
2029	10.04	2.12	11.55	4.22	10.31	11.47
2030	10.55	2.22	12.13	4.43	10.83	12.05
2031	11.07	2.33	12.73	4.65	11.37	12.65
2032	11.63	2.45	13.37	4.89	11.94	13.28
2033	12.21	2.57	14.04	5.13	12.53	13.95
2034	12.82	2.70	14.74	5.39	13.16	14.64
2035	13.46	2.84	15.48	5.66	13.82	15.37
2036	14.13	2.98	16.25	5.94	14.51	16.14
2037	14.84	3.13	17.06	6.24	15.23	16.95
2038	15.58	3.28	17.92	6.55	16.00	17.80
2039	16.36	3.45	18.81	6.88	16.80	18.69
2040	17.18	3.62	19.75	7.22	17.64	19.62
2041	18.04	3.80	20.74	7.58	18.52	20.60
2042	18.94	3.99	21.78	7.96	19.44	21.63
2043	19.89	4.19	22.87	8.36	20.42	22.72
2044	20.88	4.40	24.01	8.78	21.44	23.85
2045	21.92	4.62	25.21	9.21	22.51	25.04

Year	1. Suzhou	2. Xuancheng	3. Anqing	4. Ningguo	5. Lu'An	Salary Increase
2046	23.02	4.85	26.47	9.68	23.63	26.30
2047	24.17	5.10	27.80	10.16	24.82	27.61
2048	25.38	5.35	29.18	10.67	26.06	28.99
2049	26.65	5.62	30.64	11.20	27.36	30.44
2050	27.98	5.90	32.18	11.76	28.73	31.96
2051	29.38	6.19	33.79	12.35	30.16	33.56
Total	474.23	99.98	545.33	199.32	486.86	541.72

Source: The task team's calculations based on the feasibility study report.

Benefit-cost Ratio and IRR

45. For the benefit-cost analysis, the present value of benefit and the cost are used. The formula to calculate present value is:

$$present\ value = \frac{current\ value}{(1 + discount\ rate)^{time}}$$

46. For the calculation of the benefit-cost ratio (BCR), the total present value of benefit should be divided by the total present value of the cost. If the BCR is greater than one, then the project benefit exceeds its cost. The IRR is the discount rate that yields a BCR of one. In many cases, the IRR is the rate of return of the project.

47. To further examine the risks for the project, the cost benefit model considers a low case scenario under the following three assumptions:

(a) Economic growth slows down from 6 (the baseline) to 3 percent of China's GDP and wage growth slows down as well, thus reducing the monetary value of labor saved;
(b) Instead of the 80 percent occupancy rate (the baseline), only 60 percent of the skilled nursing beds that have been built are occupied; and
(c) Instead of the current Renminbi exchange rate (0 percent depreciation, the baseline), Renminbi experiences an average annual depreciation of 5 percent over the next four years (during the construction period). In this case the US dollar value of the benefit that the project activities would generate would be lower.

48. The baseline and low case BCR and IRR are shown in table 5.18. The BCR in the baseline scenario is 3.6 (row 1), greater than one, which shows the benefits are almost three times higher than the costs. The corresponding IRR is 14 percent, indicating that only if the discount rate reaches 14 percent, the benefits of the project equals its costs. The sensitivity analysis considering the low case scenario yields a smaller BCR (row 2)—3.19, but it is still significantly larger than one. The corresponding IRR now decreases slightly to 13 percent.

49. The IRR confirms the result from the BCR and illustrates a potentially efficient investment.

Table 5.18. IRR under Different Scenarios

	BCR	IRR (%)
Baseline	3.60	14
Low case scenario	3.19	13

Source: The task team's calculations.

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