

K c`Z]b`6fY[ YbnYfk U`X`Yf`Y[ h. `8 YVUhhY  
i a `>U[ X`i bX`< YfXYbgW i hn`YbhVfYbbh

9]b`K c`Zk i fXY`Ua `6cXYbgYY`Yf`Y[ hž`cZZYbVUf`bUW`j ]Y`Yb  
J ]Y\ØVYf[ f]ZZYb''8Yf`YfghY`cZZ]n]Y``Y`5VgW i gg`k ]fZh: fU[ Yb  
Ui Z'

Nk Y]`Ai » Yfgh`gdUbbYbXY`i bX`[ `Y]W`nY]h][ `VYgcf[ b]gYffY[ YbXY  
J cfZÄ``Y`\UVYb`g]W`]b`XYb`Y`hnhYb`K c`W`Yb`]b`XYf`F`Y[ ]cb`i a `X]Y  
? Ub]gZi \ `UV[ Ygd]Y`h''8]YgY`YfY][ bYhYb`g]W`]a `Ni`gUa`a`Yb\Ub[  
a ]h`XYf`K c`Zg`U[ Xž`X]Y`bi b`Ui`W`]b`J`cf`Uf`VYf[ `Ub`6YXY`i`hi`b[  
[ Yk ]bbh''8Yf`YfghY`cZZ]n]Y``Y`5VgW i gg`Y]bYg`K c`Z`Yg`]b`XYf`F`Y[ ]cb  
VY[ ]b[ `K`Y``Yb`XYg`&hYfYggYg`i bX`XYf`8]g`\_`gg]cbž`]bgVYgcbXYfY  
i bhYf`XYb`<]fhYbž`X]Y`k`Ä`fYbX`XYf`5`a`gU]gcb`]\fY`H]YfY`Ui`Z`XYb  
6Yf[ k Y]XYb`VYhfY`i`Yb''

8]Y`i a ghÄbXYž`X]Y`ni`X]YgYa`hØ`X`]W`Yb`J`cf`ZU``ZØ`fhYbž`g]bX  
[ Ygd]W`\_h`a`]h`f`cb]Y`i bX`Y]bYa`<Ui`W`]`cb`HfU[ ]\_''9]b`YfZU`fYbYf  
>Ä[ Yfž`XYf`c`ZZYbVUf`ZØf`XYb`5VgW i gg`Ui`Z`GhY]bk`]`X`d]fgW`hž`ghY``hY  
ØVYffUgW`YbXYfk`Y]gY`Y]bYb`K c`Z]b`i ba`]hY`VUfYf`B`Ä`Y`gY]bYf  
6Yi`hY`Z`Ygh`Bi`f`&\$`\$`A`YhYf`hfYbbhYb`X]Y`H]YfY`j`cb`Y]bUbXYfž`U`g  
XYf`>Ä[ Yf`XYb`YbhgW`Y]XYbXYb`GW i gg`UV[ UV''

B U\`\_Ua`dZ`nk ]gW`Yb`A`YbgW`Yb`i`bX  
F Ui`Vh]YfYb

8Yf`J`cf`ZU``\`Uh`g]W`]b`XYf`YfghYb`5i [ i gh`Ä`ZhY`Ui`Z`XYf`GØXgY]hY  
XYg`&\$`(`A`YhYf`\`c`Yb`6Yf[ a`Ugg]j`g`?`Ub]gZi`\`YfY][ bYh''8]Yg  
a`Uf\_]Yfh`XYb`YfghYb`c`ZZ]n]Y``[ YbY`a`][ hYb`K c`ZgUVgW i gg`]b`XYf  
[ Y[ Ybk`Äfh][ Yb`NY]hž`k`Ug`XUg`;`YgW`Y`Yb`VYgcbXYfYg  
VYa`Yf`\_Ybgk`Yfh`a`UW`h`'`&`XYf`J`Yf[ Ub[ Yb`Y]h[ UV`Yg`VYfY]hg  
a`Y`fYfY`J`cf`ZÄ``Yž`VY]`XYbYb`Bi`hnh]YfY`XYf`<]fhYb`Xi`fW`K`Ø`ZY

[ Yh0hYhk i fXYb"Ni bÅW gh\ UbXY`hY`Yg`g]W`i a`GW UZY`i bX  
N]Y[ Ybž`XcW`bUW`XYa`Y]bY`\cW`hfÅW`h][ Y`?i` \`Ub[ Y[ f]ZYZ  
k i fXYž`\_Ua`Yg`ni`Y]bYa`a`Uggj`Yb`8fi`W`\_Ui`Z`X]Y`6Y\`ÖfXYb"5i`W  
nk`Y]`ž`b[ f]bXYf`i`bX`Y]b`?U`V`k`i`fXYb`j`cb`XYa`H]Yf`[ Yh0hYhž  
k`cfUi`Z`X]Y`6Yn]f`\_g`Ui`d`ha`UbbgW`UZh`XYf`F`Y[ ]cb`Y]b`Y  
5VgW`i`ggj`YfZ0[ i`b[ `YfUi`g[ UV"

8]Y`B`Yfj`cg]hÅ`hi`bhYf`XYb`<]fhYb`k`Uf`ni`gd0fYbž`VYgcbXYfg  
bUW`XYa`g]Y`ja`a`Yf`k`]YXYf`Ui`Z`F]ggY`gh]Y»Yb`i`bX`]`fY`H]YfY`]b  
5b[ gh`YVhYb"BUW`h`Z0f`BUW`h`ž`VYf]W`hYb`Y]b][ Y`X`Uj`cbž`k`UfYb  
k`j`f`]b`ghÅ`bX][ Yf`I`bfi` \Y"8i`k`Y]»h`b]Yž`c`V`Xi`\_Ua`bÅW`ghYb  
A`cf[ Yb`Y]b`k`Y]hYfYg`hchYg`H]Yf`Z]bXYgh"8`Ug`ghÅ`bX][ Y`;`YZ0`ž  
X`Ug`X]Y`H]YfY`]b`;`YZU`f`k`UfYbž`Z0`fhY`ni`Y]bYa`Ybcfa`Yb  
dgmW`]gW`Yb`8fi`W`\_Ui`Z`X]Y`<]fhYbž`X]Y`HUi`gYbXY`j`cb`H]YfYb`Ui`Z  
XYb`K`Y]XYb`VYhfYi`Yb"

## F`Y`W`hg`U[ Y`i`bX`\_c`b`h`f`c`j`Y`f`g`Y`8`]g`\_i`gg]c`b`Y`b

8]Y`f`Y`W`h`]W`Yb`F`U`a`Yb`VYX]b[ i`b[ Yb`Z0f`XYb`5VgW`i`gg`UVYb  
g]W`]b`J`cfUf`VYf[ `j`YfÅ`b`XYfh"BUW`Y]bYf`F`Y]\`Y`j`cb`J`cfZ`Å`Yb`i`bX  
XYa`5i`g`0gYb`Y]bYg`0ZZYb`h`]W`Yb`8]g`\_i`fgYg`0VYf`XYb`K`c`Z  
k`i`fXYb`9f`Y]W`hYfi`b[ Yb`Z0f`XYb`5VgW`i`gg`VYgW`c`ggYb"8Yf  
@UbXYgfUh`7`f]gh]Ub`;`UbhbYf`ghY`hY`\_`Ufž`X`Ugg`Y]bY`f`chY`@]b]Y  
Xi`f`W`X]Y`5b[ f]ZYZ`0VYfgW`f]hhYb`k`i`fXY`i`bX`Yg`b`chk`YbX][ `gY]ž  
gW`bY`ni` \`UbXY`b"8]Y`9b`hgW`Y]Xi`b[ `]gh`Y`X`c`W`b]W`h`c`b`Y  
?`c`b`h`f`c`j`Y`f`g`Y`b`/`I`a`k`Y`h`c`f[ `Ub]gUh]c`b`Y`b`k`]Y`X`Y`f`K`K`:`\`UVYb  
VYfY]hg`Ub[ Y`\_0bX][ hž`f`Y`W`h`]W`Y`G`W`f]hY`[ Y[ Yb`X]YgYb  
K`c`ZgUVgW`i`gg`Y]bni`Y]hYb"

8]Y`8]g`\_i`gg]c`b`0VYf`XYb`K`c`Z`i`bX`X]Y`B`chk`YbX][ `Y]hž`]\`b`ni  
Yf`Y[ Ybž`Z]bXYhg]W`Y`X`c`W`b]Y]bYa`ja`a`Yf`k`]YXYf`\_Y`f`Y`b`XYb  
A`i`ghYf" `?`f]h`\_i`bX`5bZY]bXi`b[ Yb`j`cb`VY]XYb`GY]hYb`g]bX`Ub`XYf  
HU[ Ygc`f`X`bi`b[ "K`Å`f`Y`b`X`X]Y`H]YfgW`0`h`n`Y`f`XYb`K`c`Z`U`g  
gW`0`h`n`Y`b`g`k`Y`f`h`Y`g`H]Yf`VYhf`UW`h`Y`b`ž`Ya`dZ]bXYb`X]Y`<]fhYb`]`b`U`g  
6YXfc`i`b[ `Z0f`]\`f`J]Y`\`8]Y`6Yf[ `V`U`i`Y`fb`]\]b[ Y[ Ybž`X]Y`c`ZhigY]h  
;`YbYfUh]c`b`Y`b`]b`XYf`F`Y[ ]cb`Y`VYbž`g`Y`Y`b`X]Y`9f`U`hi`b[ `]\`f`Y`f  
@YVYbg[ fi`bX`U[ Y`]b`;`YZU`f`"

ϕ`X]YgYf`Ub[ YgdUbbhYb`G]hi Uh]cb`VYgW`cgg`XYf`>A[ Yfz`XYf`XYb  
K c`ZYf`Y[ hYz`gW`bY`ni `UbXY`bž`U`g`Yf`X]Y`A`O[ `]W`\_Y]h`XUni`gU`"  
8]Y`I`a`gh`b`XYž`k`j]Y`X]YgYf`5VgW`i`gg`ni`ghUbXY`\_Ua`ž`k`YfXYb`j`cb  
j`j]Y`Yb`U`g`ni`Z`A`][`i`bX`i`bj`cf`YfgY`VUf`VYhfUW`hYhž`UVYf`X]Y  
[ YVU`hY`@UXi`b[ `XYg`8fi`W`g`Ui`Z`X]Y`>A[ Yf`k`Uf`b]W`h`ni  
ØVYfgY`Yb`"

8]Y`<]fhYb`i`bX`9]bk`c`bYf`XYf`F`Y[ ]cb`g]bX`g]W`Y`b][`.`8Ug`H`Y`a`U  
a`i`gg[ f0bX`]W`X]g`\_i`h]Yfhk`YfXYbž`Y`Xc`W`]gh`X]Y`5b[ gh]j`cf`XYb  
K`O`ZYb`fYU`i`bX`k`j]f`X`Xi`fW`X`Ug`]a`a`Yf`k`j]XYf`\_Y`fYbXY`H`Y`a`U  
]b`XYb`gcn]U`Yb`BYhnk`Yf`\_Yb`i`bX`i`cfYb`ni`g`h`m`]W`j`Yfgh`f`\_h`"  
CVk`c`X`X]Y`I`a`[ YVi`b[ `gW`O`b`]ghž`k`j]f`X`X]Y`i`fU[ Y`Ui`Z`Yk`cfZYb.  
K`j]j`j]Y`D`Uhm`Z0f`XYb`K`c`Z]b`X]YgYf`6Yf[ k`Y`h`V`Y]Vh3

## 9]b`gW`k`j]Yf][`Yg`;>`Y]W`[`Yk`]W`h`Z]bXYb

8]Y`G]hi`Uh]cb`fi`bX`i`a`X]Y`K`O`ZY`]b`J`cfUf`VYf[ `]gh`b]W`h`bi`f`Y]b  
`c`\_U`Yg`D`A`bca`Ybž`gcbXYfb`k`j]fZi`Ui`W`i`[`fi`bX`Y[`YbXY`i`fU[`Yb  
ØVYf`XYb`I`a`[`Ub[`i`a`]h`K`j`Xh]YfYb`]b`XYb`5`dYb`Ui`Z`ϕ`gVYgcbXYfY  
]b`Y]bYf`NY]hž`]b`XYf`XYf`?`cbhU`\_h`nk`]gW`Yb`A`YbgW`i`bX`B`Uhi`f  
a`Y`f`XYbb`Y`[`Y`ZcfXYfhk`j]fXž`]gh`Y]b`Ui`g[`Yk`c[`YbYg`J`Yf`A`h`b]g  
i`bYf`A`gg`]W`"9g`k`j]fX`b`ch`k`YbX][`i`gY]bž`dfU`\_h]\_UV`Y`@Ogi`b[`Yb`ni  
Z]bXYbž`X]Y`gck`c`X`Yb`6YX0fZb]ggYb`XYf`<]fhYb`U`g`Ui`W`X`Y`a  
G`W`i`h`m`X`Yf`K`O`ZY`F`Y`W`bi`b[`hfU[`Yb`"8]YgYf`GdU[`Uh`YfZcfXYfh`NY]hž  
;`YXi`X`i`bX`i`a`ZUggYbXY`i`Ygdf`A`W`Y`nk`]gW`Yb`U`Yb`VYhY`][`hYb  
DUfhY]Yb`"

<]b`hYf[`fi`bX]bZcfa`Uh]cbYb`ni`f

K`c`Zgg]hi`Uh]cb`]b`9i`fcdU

8]Y`F`ØW`\_Y`f`XYg`K`c`g`]b`j`j]Y`Yb`HY]Yb`9i`fcdUg`]gh`Y]b`H`Y`a`Už  
XUg`gck`c`X`j`cb`B`Uhi`fgW`i`hncf[`Ub]gUh]cbYb`U`g`Ui`W`j`cb  
@UbXk`j]fhYb`Y]XYbgW`UZh`]W`X]g`\_i`h]Yfhk`j]fX`"ϕ`XYb`Y`h`hYb  
>U`fn`Y`b`hYb`U`h`g]W`X]Y`K`c`Zgdc`di`Uh]cb`]b`j`j]Y`Y`F`Y[ ]cbYb  
A`]hY`!`i`bX`K`YghYi`fcdUg`k`j]XYf`Y`hUV`]Yfhž`]bgVYgcbXYfY`]b  
@AbXYfb`k`j]8Yi`hgW`UbXž`2`ghYffY]W`i`bX`XYb`bcfXYi`fcdA]gW`Yb  
GhUUhYb`"ϕ`8Yi`hgW`UbX`k`i`fXYb`X]Y`YfghYb`K`O`ZY`b`UW`X`Y`a

k Y]h[ Y\YbXYb`J YfgWk ]bXYb`XYf`5fh]b`XYb`%- - \$Yf`đ\FYb  
k ]YXYf`[ Yg]Wk hYhž`i bX`gY]hXYa` ]gh`X]Y`Dcdi`Uh]cb`\_cbh]bi ]Yf`]Wk  
[ Yk UWk gYb`"8]Yg`U`h`ni`GdUbbi b[ Yb`nk ]gWk Yb`XYb`đbhYfYggYb  
XYf`@UbXk ]fhgWk UZh`i bX`XYa` BUhi fgWk i hn`[ YZ\fh`"8Yf`K`c`Z]gh  
gY]h`XYb`%- +\$Yf`đ\FYb`Xi fWk`X]Y` : Ui bU! : `cfU!<UV]hUh!F]Wk h]b]Y  
XYf`9I` [ YgWk Ømhž`k Ug`gY]bYb`F ØW\_[ Ub[ `]b`j ]Y`Yb` ; YV]YhYb`ni f  
: c`[ Y`U`h`h`ž`UVYf`Ui Wk`fYWk h]Wk Y`<YfUi gZc`fXYfi b[ Yb`ZØf  
`UbXk ]fhgWk UZh]Wk Y`6Yhf]YVY`a` ]h`g]Wk`VfUWk hY`": Øf`j ]Y`Y`@UbXk ]fhY  
VYXYi hYh`X]Ygž`XUgg`g]Y`ni gÅhn`]Wk Yb`GWk i hn`ZØf`]\f`J ]Y\  
VYbØh] [ Ybž`i a` ?`cbZ]\_hY`a` ]h`K`Ò`ZYb`ni`a` ]b]a` ]YfYb`"

8]Y` [ YgYhn`]Wk Yb`FY [ Y`i b[ Yb`ni a` K`c`Z`ZU`Yb`]b`j ]Y`Yb`@AbXYfb  
i bhYfgWk ]YX`]Wk`Ui g`"đ`²`ghYffY]Wk`g]bX`g]Y`ja` BUhi fgWk i hn`[ YgYhn  
[ YfY [ Y`hž`k`Å`fYbX`]b`8Yi hgWk`UbX`XUg`6i bXYgbUhi fgWk i hn`[ YgYhn  
ni a` HfU [ Yb`\_ca`a`h`"đ`XYb`a`Y]ghYb`6i bXYg`AbXYfb  
8Yi hgWk`UbXgž`k ]Y`GUWk gYb`i bX`6fUbXYbVi f [ ž`g]bX`X]Y  
FY [ Y`i b [ Yb`U`Y`fX]b [ g`fYghf]\_h]j Yf` [ YghU`hYh`"8 Ug`VYXYi hYhž`XUgg  
XYf`5VgWk i gg`Y]bYg`K`c`Z`g`bi f`i bhYf`ghfYb [ Yb`5i ZU [ Yb  
[ YbY`a` ] [ h`k`YfXYb`\_Ubb`"8]YgY`fYWk h]Wk Yb`i bhYfgWk ]YXY`U`VYb  
ni f` : c` [ Yž`XUgg`j YfgWk ]YXYbY`6i bXYg`AbXYf`i bhYfgWk ]YX`]Wk Y  
GhfUhY [ ]Yb`]a` i`a` [ Ub [ `a` ]h`XYf`K`c`Z`gdc`di`Uh]cb`j YfZc` [ Ybž`k`Ug  
k ]YXYfi a`ni`Zfi ghf]YfhYb`@UbXk ]fhYb`ZØ`fYb`\_Ubbž`X]Y`]b`j`cb  
K`Ò`ZYb`VYhfc`ZYbYb` ; YV]YhYb`YVYb`"

## 5\_hi Y`Y`GhUh]gh]\_Yb`ØVYf`K`c`Zgj`cf`\_ca`a`Yb i`bX`J ]Y`gWk`ÅXYb`

@Ui h`XYa`6i bXYgUa`h`ZØf`BUhi fgWk i hn`]b`8Yi hgWk`UbX`[ UV`Yg`]a  
đ\f`&\$&&gWk`Åhni b [ gk`Y]gY`%"` \$\$`K`Ò`ZYž`X]Y`]b`Yhk`U` \$\$`Fi`XY`b  
`YVhYb`fE`i`Y`Y` : **6i bXYgUa`h`ZØf`BUhi fgWk i hn`**"8]YgY  
Dcdi`Uh]cb`U`h`g]Wk`ØVYf`X]Y`Y`h`hYb`đ\FY`n]Ya` ]Wk`ghUV`]  
Yb`hk`]W`Y`h`"5`Y`fX]b [ g`]gh`X]Y`Ni bU`a`Y`XYf`K`c`Z`gdc`di`Uh]cb  
hY`]k`Y]gY`a` ]h`Y`f`Y`V`]Wk Yb`Z]b`Ub`n]Y`Y`b`J`Y`f`i`ghYb`ZØf`J ]Y`n`ØWk`hYf`  
j`Y`f`Vi`bXYb`"đ`đ\f`&\$&%`a`Y`XYhYb`X]Y`b]YXYfg`ÅWk`g]gWk`Yb  
6Y`U`ØfXYb`Y]bYb`5bgh]Y [ `XYf`F]ggY`j`cb`GWk`UZYb`i`bX` [ fc`»`Yb  
<`i`Zh]YfYb`Xi fWk`K`Ò`ZY`Ui`Z`a`Y`f`U`g`-`\$\$`: `Å`Y`"8 Ug`ZØ`fhY`ni  
Y]bYa`GWk`UXYb`j`cb`a` ]bXYghYbg`\*`\$\$`\$\$`\$`9i`fcž`k`Ug`X]Y  
DfcV`Ya`Uh]\_j`YfXYi`h]Wk`hž`a` ]h`XYf`J ]Y`n`ØWk`hYf`\_cb`Zfc`bh]Y`fh`g]b`X

fE i Y`Yb. 'B ]YXYfgUWk gYbŁ" 'C V[ `Y]Wk '9bhgWkÅX][ i b[ Yb` ]b`j ]Y`Yb  
6i bXYg`ÀbXYfb`ZØf`[ Yf]ggYbY`H]YfY`Ub[ YVchYb`k YfXYbžZØ\`Yb  
g]Wk`j ]Y`Y`@UbXk ]fhY`XYbbcWk`b]Wk h`Ui gfY]Wk YbX`[ YgWkØhnh"

⇒b`² ghYffY]Wk`g]bX`X]Y`8 UhYb`À\b`]Wk`VYgcf[ b]gYffY[ YbX" `8Yf  
ØghYffY]Wk]gWk Y`5[ fUfVYf]Wk h`nY][ hž`XUgg`]a` `đ\`f`&\$\$`U`Y]b`]b  
J cfUf`VYf[ `ØVYf`%\$\$`:`À`Y`j`cb`J ]Y\`gWkÅXYb`Xi fWk`K`Ø`ZY  
fY[ ]ghf]Yfh`k`i`fXYb" `8]Yg`YVh`X]Y`B`chk`YbX][`\_]h`\Yfj`cfž`X]Y  
Gcf[ Yb`XYf`@UbXk ]fhY`Yfbghini`bY\`a`Yb`i`bX`[ `Y]Wk`nY]h][`XYb  
BUhi`fgWk`i`hn`]b`9]b`\_`Ub[ `ni`Vf]b[ Yb"

8YhU]`g

6Ygi Wk Yb`G]Y`i`bg`Ui`Z.`b!U[ "XY